

<init>: Step 0

current update queue: [11]

annotation:  $haveRead = sf_{61}$

|    |                |
|----|----------------|
| 0: | <b>aload_0</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                         |
|----|-------------------------|
| 1: | <b>invokespecial 14</b> |
|----|-------------------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                |
|----|----------------|
| 4: | <b>aload_0</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                |
|----|----------------|
| 5: | <b>aload_1</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                    |
|----|--------------------|
| 6: | <b>putfield 16</b> |
|----|--------------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                |
|----|----------------|
| 9: | <b>aload_0</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|     |                |
|-----|----------------|
| 10: | <b>iload_2</b> |
|-----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|     |                    |
|-----|--------------------|
| 11: | <b>putfield 18</b> |
|-----|--------------------|

|             |                      |
|-------------|----------------------|
| annotation: | $haveRead = sf_{61}$ |
|-------------|----------------------|

|     |               |
|-----|---------------|
| 14: | <b>return</b> |
|-----|---------------|

<init>: Step 1

current update queue: [10]

annotation:  $haveRead = sf_{61}$

|    |                |
|----|----------------|
| 0: | <b>aload_0</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                         |
|----|-------------------------|
| 1: | <b>invokespecial 14</b> |
|----|-------------------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                |
|----|----------------|
| 4: | <b>aload_0</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                |
|----|----------------|
| 5: | <b>aload_1</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                    |
|----|--------------------|
| 6: | <b>putfield 16</b> |
|----|--------------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|    |                |
|----|----------------|
| 9: | <b>aload_0</b> |
|----|----------------|

|             |             |
|-------------|-------------|
| annotation: | <b>true</b> |
|-------------|-------------|

|     |                |
|-----|----------------|
| 10: | <b>iload_2</b> |
|-----|----------------|

|             |                      |
|-------------|----------------------|
| annotation: | $haveRead = sf_{61}$ |
|-------------|----------------------|

|      |                    |
|------|--------------------|
| 11*: | <b>putfield 18</b> |
|------|--------------------|

|             |                      |
|-------------|----------------------|
| annotation: | $haveRead = sf_{61}$ |
|-------------|----------------------|

|     |               |
|-----|---------------|
| 14: | <b>return</b> |
|-----|---------------|

<init>: Step 2

current update queue: [9]

annotation:  $haveRead = sf_{61}$

|             |                         |
|-------------|-------------------------|
| 0:          | <b>aload_0</b>          |
| annotation: | <b>true</b>             |
| 1:          | <b>invokespecial 14</b> |
| annotation: | <b>true</b>             |
| 4:          | <b>aload_0</b>          |
| annotation: | <b>true</b>             |
| 5:          | <b>aload_1</b>          |
| annotation: | <b>true</b>             |
| 6:          | <b>putfield 16</b>      |
| annotation: | <b>true</b>             |
| 9:          | <b>aload_0</b>          |
| annotation: | $haveRead = sf_{61}$    |
| 10*:        | <b>iload_2</b>          |
| annotation: | $haveRead = sf_{61}$    |
| 11:         | <b>putfield 18</b>      |
| annotation: | $haveRead = sf_{61}$    |
| 14:         | <b>return</b>           |



<init>: Step 3

current update queue: [6]

annotation:  $haveRead = sf_{61}$

0: **aload\_0**

annotation: **true**

1: **invokespecial 14**

annotation: **true**

4: **aload\_0**

annotation: **true**

5: **aload\_1**

annotation: **true**

6: **putfield 16**

annotation:  $haveRead = sf_{61}$

9\*: **aload\_0**

annotation:  $haveRead = sf_{61}$

10: **iload\_2**

annotation:  $haveRead = sf_{61}$

11: **putfield 18**

annotation:  $haveRead = sf_{61}$

14: **return**

<init>: Step 4

current update queue: [5]

annotation:  $haveRead = sf_{61}$

0: **aload\_0**

annotation: **true**

1: **invokespecial 14**

annotation: **true**

4: **aload\_0**

annotation: **true**

5: **aload\_1**

annotation:  $haveRead = sf_{61}$

6\*: **putfield 16**

annotation:  $haveRead = sf_{61}$

9: **aload\_0**

annotation:  $haveRead = sf_{61}$

10: **iload\_2**

annotation:  $haveRead = sf_{61}$

11: **putfield 18**

annotation:  $haveRead = sf_{61}$

14: **return**

<init>: Step 5

current update queue: [4]

annotation:  $haveRead = sf_{61}$

0: **aload\_0**

annotation: **true**

1: **invokespecial 14**

annotation: **true**

4: **aload\_0**

annotation:  $haveRead = sf_{61}$

5\*: **aload\_1**

annotation:  $haveRead = sf_{61}$

6: **putfield 16**

annotation:  $haveRead = sf_{61}$

9: **aload\_0**

annotation:  $haveRead = sf_{61}$

10: **iload\_2**

annotation:  $haveRead = sf_{61}$

11: **putfield 18**

annotation:  $haveRead = sf_{61}$

14: **return**



<init>: Step 6

current update queue: [1]

annotation:  $haveRead = sf_{61}$

0: **aload\_0**

annotation: **true**

1: **invokespecial 14**

annotation:  $haveRead = sf_{61}$

4\*: **aload\_0**

annotation:  $haveRead = sf_{61}$

5: **aload\_1**

annotation:  $haveRead = sf_{61}$

6: **putfield 16**

annotation:  $haveRead = sf_{61}$

9: **aload\_0**

annotation:  $haveRead = sf_{61}$

10: **iload\_2**

annotation:  $haveRead = sf_{61}$

11: **putfield 18**

annotation:  $haveRead = sf_{61}$

14: **return**

<init>: Step 7

current update queue: [0]

annotation:  $haveRead = sf_{61}$

0: **aload\_0**

annotation:  $haveRead = sf_{61}$

1\*: **invokespecial 14**

annotation:  $haveRead = sf_{61}$

4: **aload\_0**

annotation:  $haveRead = sf_{61}$

5: **aload\_1**

annotation:  $haveRead = sf_{61}$

6: **putfield 16**

annotation:  $haveRead = sf_{61}$

9: **aload\_0**

annotation:  $haveRead = sf_{61}$

10: **iload\_2**

annotation:  $haveRead = sf_{61}$

11: **putfield 18**

annotation:  $haveRead = sf_{61}$

14: **return**



<init>: Step 8

current update queue: []

annotation:  $haveRead = sf_{61}$

0\*: **aload\_0**

annotation:  $haveRead = sf_{61}$

1: **invokespecial 14**

annotation:  $haveRead = sf_{61}$

4: **aload\_0**

annotation:  $haveRead = sf_{61}$

5: **aload\_1**

annotation:  $haveRead = sf_{61}$

6: **putfield 16**

annotation:  $haveRead = sf_{61}$

9: **aload\_0**

annotation:  $haveRead = sf_{61}$

10: **iload\_2**

annotation:  $haveRead = sf_{61}$

11: **putfield 18**

annotation:  $haveRead = sf_{61}$

14: **return**

run: Step 0

current update queue: [114, 140, 166]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <b>true</b>                                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <b>true</b>                                           |
| 108:        | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 109:        | bipush 10                                             |
| annotation: | <b>true</b>                                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <b>true</b>                                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 128:        | ldc 99                                                |
| annotation: | <b>true</b>                                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 133:        | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 134:        | getfield 16                                           |
| annotation: | <b>true</b>                                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <b>true</b>                                           |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | <b>true</b>                                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 159:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <b>true</b>                                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |

run: Step 1

current update queue: [140, 166, 111]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore.1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload.0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload.1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload.1                                               |
| annotation: | true                                                  |
| 41:         | astore.3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst.0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst.1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst.m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload.3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore.2                                              |
| annotation: | true                                                  |
| 79:         | aload.2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload.0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload.2                                               |
| annotation: | true                                                  |
| 109:        | bipush 10                                             |
| annotation: | true                                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114*:       | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore.1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload.1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload.0                                               |
| annotation: | true                                                  |
| 134:        | getfield 16                                           |
| annotation: | true                                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | true                                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore.1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload.1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | true                                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | true                                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |



run: Step 2

current update queue: [166, 111, 137]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <b>true</b>                                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <b>true</b>                                           |
| 108:        | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 109:        | bipush 10                                             |
| annotation: | <b>true</b>                                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 128:        | ldc 99                                                |
| annotation: | <b>true</b>                                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 133:        | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 134:        | getfield 16                                           |
| annotation: | <b>true</b>                                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 140*:       | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | <b>true</b>                                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 159:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <b>true</b>                                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 169:        | return                                                |

run: Step 3

current update queue: [111, 137, 163]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | true                                                  |
| 109:        | bipush 10                                             |
| annotation: | true                                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | true                                                  |
| 134:        | getfield 16                                           |
| annotation: | true                                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | true                                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166*:       | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 4

current update queue: [137, 163, 109]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | true                                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111*:       | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | true                                                  |
| 134:        | getfield 16                                           |
| annotation: | true                                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | true                                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |



run: Step 5

current update queue: [163, 109, 134]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | true                                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | true                                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137*:       | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | true                                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 6

current update queue: [109, 134, 160]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | true                                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | true                                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163*:       | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |



run: Step 7

current update queue: [134, 160, 108]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109*:       | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | true                                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 8

current update queue: [160, 108, 133]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134*:       | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | true                                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 9

current update queue: [108, 133, 159]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | true                                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | true                                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160*:       | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |



run: Step 10

current update queue: [133, 159, 105]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <b>true</b>                                           |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108*:       | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 128:        | ldc 99                                                |
| annotation: | <b>true</b>                                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | <b>true</b>                                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 11

current update queue: [159, 105, 130]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | true                                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133*:       | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | true                                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 12

current update queue: [105, 130, 156]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <b>true</b>                                           |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 128:        | ldc 99                                                |
| annotation: | <b>true</b>                                           |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | <b>true</b>                                           |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159*:       | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |



run: Step 13

current update queue: [130, 156, 102]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105*:       | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | true                                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | true                                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 14

current update queue: [156, 102, 128]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 102:        | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 128:        | ldc 99                                                |
| annotation: | $haveRead = sf_{61}$                                  |
| 130*:       | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | <b>true</b>                                           |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |



run: Step 15

current update queue: [102, 128, 154]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | true                                                  |
| 2:          | astore_1                                              |
| annotation: | true                                                  |
| 3:          | getstatic 31                                          |
| annotation: | true                                                  |
| 6:          | new 33                                                |
| annotation: | true                                                  |
| 9:          | dup                                                   |
| annotation: | true                                                  |
| 10:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 13:         | ldc 36                                                |
| annotation: | true                                                  |
| 15:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 18:         | aload_0                                               |
| annotation: | true                                                  |
| 19:         | getfield 18                                           |
| annotation: | true                                                  |
| 22:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 25:         | ldc 45                                                |
| annotation: | true                                                  |
| 27:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 30:         | aload_1                                               |
| annotation: | true                                                  |
| 31:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 34:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 37:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 40:         | aload_1                                               |
| annotation: | true                                                  |
| 41:         | astore_3                                              |
| annotation: | true                                                  |
| 42:         | getstatic 61                                          |
| annotation: | true                                                  |
| 45:         | iconst_0                                              |
| annotation: | true                                                  |
| 46:         | if_icmpne 56                                          |
| annotation: | true                                                  |
| 49:         | iconst_1                                              |
| annotation: | true                                                  |
| 50:         | putstatic 61                                          |
| annotation: | true                                                  |
| 53:         | goto 74                                               |
| annotation: | true                                                  |
| 56:         | getstatic 64                                          |
| annotation: | true                                                  |
| 59:         | dup                                                   |
| annotation: | true                                                  |
| 60:         | ldc 66                                                |
| annotation: | true                                                  |
| 62:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 65:         | ldc 68                                                |
| annotation: | true                                                  |
| 67:         | invokevirtual 55                                      |
| annotation: | true                                                  |
| 70:         | iconst_m1                                             |
| annotation: | true                                                  |
| 71:         | invokestatic 72                                       |
| annotation: | true                                                  |
| 74:         | aload_3                                               |
| annotation: | true                                                  |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | true                                                  |
| 75:         | invokestatic 78                                       |
| annotation: | true                                                  |
| 78:         | astore_2                                              |
| annotation: | true                                                  |
| 79:         | aload_2                                               |
| annotation: | true                                                  |
| 80:         | new 33                                                |
| annotation: | true                                                  |
| 83:         | dup                                                   |
| annotation: | true                                                  |
| 84:         | invokespecial 34                                      |
| annotation: | true                                                  |
| 87:         | ldc 80                                                |
| annotation: | true                                                  |
| 89:         | invokevirtual 40                                      |
| annotation: | true                                                  |
| 92:         | aload_0                                               |
| annotation: | true                                                  |
| 93:         | getfield 18                                           |
| annotation: | true                                                  |
| 96:         | invokevirtual 43                                      |
| annotation: | true                                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | true                                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | true                                                  |
| 117:        | astore_1                                              |
| annotation: | true                                                  |
| 118:        | getstatic 31                                          |
| annotation: | true                                                  |
| 121:        | aload_1                                               |
| annotation: | true                                                  |
| 122:        | invokevirtual 97                                      |
| annotation: | true                                                  |
| 125:        | getstatic 31                                          |
| annotation: | true                                                  |
| 128:        | ldc 99                                                |
| annotation: | $haveRead = sf_{61}$                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | true                                                  |
| 143:        | astore_1                                              |
| annotation: | true                                                  |
| 144:        | getstatic 31                                          |
| annotation: | true                                                  |
| 147:        | new 33                                                |
| annotation: | true                                                  |
| 150:        | dup                                                   |
| annotation: | true                                                  |
| 151:        | invokespecial 34                                      |
| annotation: | true                                                  |
| 154:        | ldc 106                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 156*:       | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 16

current update queue: [128, 154, 99]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 102*:       | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 128:        | ldc 99                                                |
| annotation: | $haveRead = sf_{61}$                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 17

current update queue: [154, 99, 125]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128*:       | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |



run: Step 18

current update queue: [99, 125, 151]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 99:         | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | $haveRead = sf_{61}$                                  |
| 128:        | ldc 99                                                |
| annotation: | $haveRead = sf_{61}$                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 154*:       | ldc 106                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 19

current update queue: [125, 151, 96]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 99*:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <b>true</b>                                           |
| 125:        | getstatic 31                                          |
| annotation: | $haveRead = sf_{61}$                                  |
| 128:        | ldc 99                                                |
| annotation: | $haveRead = sf_{61}$                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 154:        | ldc 106                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 20

current update queue: [151, 96, 122]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 125*:       | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <b>true</b>                                           |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 169:        | return                                                |



run: Step 21

current update queue: [96, 122, 150]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | $haveRead = sf_{61}$                                  |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 96:         | invokevirtual 43                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 99:         | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 102:        | invokevirtual 86                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 105:        | invokevirtual 92                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 108:        | aload_2                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 109:        | bipush 10                                             |
| annotation: | $haveRead = sf_{61}$                                  |
| 111:        | invokevirtual 94                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 125:        | getstatic 31                                          |
| annotation: | $haveRead = sf_{61}$                                  |
| 128:        | ldc 99                                                |
| annotation: | $haveRead = sf_{61}$                                  |
| 130:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 133:        | aload_0                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 134:        | getfield 16                                           |
| annotation: | $haveRead = sf_{61}$                                  |
| 137:        | invokevirtual 104                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | $haveRead = sf_{61}$                                  |
| 151*:       | invokespecial 34                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 154:        | ldc 106                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 156:        | invokevirtual 40                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 159:        | aload_1                                               |
| annotation: | $haveRead = sf_{61}$                                  |
| 160:        | invokevirtual 109                                     |
| annotation: | $haveRead = sf_{61}$                                  |
| 163:        | invokevirtual 49                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 166:        | invokevirtual 55                                      |
| annotation: | $haveRead = sf_{61}$                                  |
| 169:        | return                                                |

run: Step 22

current update queue: [122, 150, 93]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 96*:        | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 169:        | return                                                |



run: Step 23

current update queue: [150, 93, 121]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122*:       | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <b>true</b>                                           |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |

run: Step 24

current update queue: [93, 121, 147]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 150*:       | dup                                                   |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 169:        | return                                                |

run: Step 25

current update queue: [121, 147, 92]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93*:        | getfield 18                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |



run: Step 26

current update queue: [147, 92, 118]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121*:       | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |

run: Step 27

current update queue: [92, 118, 144]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead TO haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 92:         | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147*:       | new 33                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |

run: Step 28

current update queue: [118, 144, 89]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 92*:        | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 118:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 169:        | return                                                |



run: Step 29

current update queue: [144, 89, 117]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:         | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118*:       | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 144:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |

run: Step 30

current update queue: [89, 117, 143]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <b>true</b>                                           |
| 89:         | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:         | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144*:       | getstatic 31                                          |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:        | return                                                |



run: Step 31

current update queue: [117, 143, 87]

|             |                                                       |
|-------------|-------------------------------------------------------|
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 0:          | ldc 25                                                |
| annotation: | <b>true</b>                                           |
| 2:          | astore_1                                              |
| annotation: | <b>true</b>                                           |
| 3:          | getstatic 31                                          |
| annotation: | <b>true</b>                                           |
| 6:          | new 33                                                |
| annotation: | <b>true</b>                                           |
| 9:          | dup                                                   |
| annotation: | <b>true</b>                                           |
| 10:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 13:         | ldc 36                                                |
| annotation: | <b>true</b>                                           |
| 15:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 18:         | aload_0                                               |
| annotation: | <b>true</b>                                           |
| 19:         | getfield 18                                           |
| annotation: | <b>true</b>                                           |
| 22:         | invokevirtual 43                                      |
| annotation: | <b>true</b>                                           |
| 25:         | ldc 45                                                |
| annotation: | <b>true</b>                                           |
| 27:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 30:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 31:         | invokevirtual 40                                      |
| annotation: | <b>true</b>                                           |
| 34:         | invokevirtual 49                                      |
| annotation: | <b>true</b>                                           |
| 37:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 40:         | aload_1                                               |
| annotation: | <b>true</b>                                           |
| 41:         | astore_3                                              |
| annotation: | <b>true</b>                                           |
| 42:         | getstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 45:         | iconst_0                                              |
| annotation: | <b>true</b>                                           |
| 46:         | if_icmpne 56                                          |
| annotation: | <b>true</b>                                           |
| 49:         | iconst_1                                              |
| annotation: | <b>true</b>                                           |
| 50:         | putstatic 61                                          |
| annotation: | <b>true</b>                                           |
| 53:         | goto 74                                               |
| annotation: | <b>true</b>                                           |
| 56:         | getstatic 64                                          |
| annotation: | <b>true</b>                                           |
| 59:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 60:         | ldc 66                                                |
| annotation: | <b>true</b>                                           |
| 62:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 65:         | ldc 68                                                |
| annotation: | <b>true</b>                                           |
| 67:         | invokevirtual 55                                      |
| annotation: | <b>true</b>                                           |
| 70:         | iconst_m1                                             |
| annotation: | <b>true</b>                                           |
| 71:         | invokestatic 72                                       |
| annotation: | <b>true</b>                                           |
| 74:         | aload_3                                               |
| annotation: | <b>true</b>                                           |
| 170:        | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation: | <b>true</b>                                           |
| 75:         | invokestatic 78                                       |
| annotation: | <b>true</b>                                           |
| 78:         | astore_2                                              |
| annotation: | <b>true</b>                                           |
| 79:         | aload_2                                               |
| annotation: | <b>true</b>                                           |
| 80:         | new 33                                                |
| annotation: | <b>true</b>                                           |
| 83:         | dup                                                   |
| annotation: | <b>true</b>                                           |
| 84:         | invokespecial 34                                      |
| annotation: | <b>true</b>                                           |
| 87:         | ldc 80                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 89*:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 92:         | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 93:         | getfield 18                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 96:         | invokevirtual 43                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 99:         | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 102:        | invokevirtual 86                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 105:        | invokevirtual 92                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 108:        | aload_2                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 109:        | bipush 10                                             |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 111:        | invokevirtual 94                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 114:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 117:        | astore_1                                              |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 118:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 121:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 122:        | invokevirtual 97                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 125:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 128:        | ldc 99                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 130:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 133:        | aload_0                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 134:        | getfield 16                                           |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 137:        | invokevirtual 104                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 140:        | goto 169                                              |
| annotation: | <b>true</b>                                           |
| 143:        | astore_1                                              |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 144:        | getstatic 31                                          |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 147:        | new 33                                                |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 150:        | dup                                                   |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 151:        | invokespecial 34                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 154:        | ldc 106                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 156:        | invokevirtual 40                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 159:        | aload_1                                               |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 160:        | invokevirtual 109                                     |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 163:        | invokevirtual 49                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 166:        | invokevirtual 55                                      |
| annotation: | <i>haveRead</i> = $sf_{61}$                           |
| 169:        | return                                                |

run: Step 32

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [143, 87]                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <b>true</b>                                           |
| 79:            | aload_2                                               |
| annotation:    | <b>true</b>                                           |
| 80:            | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 83:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 84:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117*:          | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <b>true</b>                                           |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |

run: Step 33

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [87]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <b>true</b>                                           |
| 79:            | aload_2                                               |
| annotation:    | <b>true</b>                                           |
| 80:            | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 83:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 84:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143*:          | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |



run: Step 34

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [84]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <b>true</b>                                           |
| 79:            | aload_2                                               |
| annotation:    | <b>true</b>                                           |
| 80:            | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 83:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 84:            | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87*:           | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |

run: Step 35

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [83]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <b>true</b>                                           |
| 79:            | aload_2                                               |
| annotation:    | <b>true</b>                                           |
| 80:            | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 83:            | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 84*:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |

run: Step 36

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [80]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <b>true</b>                                           |
| 79:            | aload_2                                               |
| annotation:    | <b>true</b>                                           |
| 80:            | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 83*:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 84:            | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |



run: Step 37

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [79]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <b>true</b>                                           |
| 79:            | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 80*:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 83:            | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 84:            | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |

run: Step 38

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [78]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <b>true</b>                                           |
| 78:            | astore_2                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 79*:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 80:            | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 83:            | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 84:            | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |



run: Step 39

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [75]                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <b>true</b>                                           |
| 75:            | invokestatic 78                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 78*:           | astore_2                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 79:            | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 80:            | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 83:            | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 84:            | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |

run: Step 40

|                |                                                       |
|----------------|-------------------------------------------------------|
| current update | queue: [170]                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 0:             | ldc 25                                                |
| annotation:    | <b>true</b>                                           |
| 2:             | astore_1                                              |
| annotation:    | <b>true</b>                                           |
| 3:             | getstatic 31                                          |
| annotation:    | <b>true</b>                                           |
| 6:             | new 33                                                |
| annotation:    | <b>true</b>                                           |
| 9:             | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 10:            | invokespecial 34                                      |
| annotation:    | <b>true</b>                                           |
| 13:            | ldc 36                                                |
| annotation:    | <b>true</b>                                           |
| 15:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 18:            | aload_0                                               |
| annotation:    | <b>true</b>                                           |
| 19:            | getfield 18                                           |
| annotation:    | <b>true</b>                                           |
| 22:            | invokevirtual 43                                      |
| annotation:    | <b>true</b>                                           |
| 25:            | ldc 45                                                |
| annotation:    | <b>true</b>                                           |
| 27:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 30:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 31:            | invokevirtual 40                                      |
| annotation:    | <b>true</b>                                           |
| 34:            | invokevirtual 49                                      |
| annotation:    | <b>true</b>                                           |
| 37:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 40:            | aload_1                                               |
| annotation:    | <b>true</b>                                           |
| 41:            | astore_3                                              |
| annotation:    | <b>true</b>                                           |
| 42:            | getstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 45:            | iconst_0                                              |
| annotation:    | <b>true</b>                                           |
| 46:            | if_icmpne 56                                          |
| annotation:    | <b>true</b>                                           |
| 49:            | iconst_1                                              |
| annotation:    | <b>true</b>                                           |
| 50:            | putstatic 61                                          |
| annotation:    | <b>true</b>                                           |
| 53:            | goto 74                                               |
| annotation:    | <b>true</b>                                           |
| 56:            | getstatic 64                                          |
| annotation:    | <b>true</b>                                           |
| 59:            | dup                                                   |
| annotation:    | <b>true</b>                                           |
| 60:            | ldc 66                                                |
| annotation:    | <b>true</b>                                           |
| 62:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 65:            | ldc 68                                                |
| annotation:    | <b>true</b>                                           |
| 67:            | invokevirtual 55                                      |
| annotation:    | <b>true</b>                                           |
| 70:            | iconst_m1                                             |
| annotation:    | <b>true</b>                                           |
| 71:            | invokestatic 72                                       |
| annotation:    | <b>true</b>                                           |
| 74:            | aload_3                                               |
| annotation:    | <b>true</b>                                           |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true> |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 75*:           | invokestatic 78                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 78:            | astore_2                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 79:            | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 80:            | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 83:            | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 84:            | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 87:            | ldc 80                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 89:            | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 92:            | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 93:            | getfield 18                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 96:            | invokevirtual 43                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 99:            | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 102:           | invokevirtual 86                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 105:           | invokevirtual 92                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 108:           | aload_2                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 109:           | bipush 10                                             |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 111:           | invokevirtual 94                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 114:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 117:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 118:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 121:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 122:           | invokevirtual 97                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 125:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 128:           | ldc 99                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 130:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 133:           | aload_0                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 134:           | getfield 16                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 137:           | invokevirtual 104                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 140:           | goto 169                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 143:           | astore_1                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 144:           | getstatic 31                                          |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 147:           | new 33                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 150:           | dup                                                   |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 151:           | invokespecial 34                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 154:           | ldc 106                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 156:           | invokevirtual 40                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 159:           | aload_1                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 160:           | invokevirtual 109                                     |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 163:           | invokevirtual 49                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 166:           | invokevirtual 55                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>             |
| 169:           | return                                                |

run: Step 41

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [74]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | <b>true</b>                                                            |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <b>true</b>                                                            |
| 49:            | iconst_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 50:            | putstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <b>true</b>                                                            |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170*:          | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |



run: Step 42

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [53, 71]                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | <b>true</b>                                                            |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <b>true</b>                                                            |
| 49:            | iconst_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 50:            | putstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74*:           | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 43

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [71, 50]                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | <b>true</b>                                                            |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <b>true</b>                                                            |
| 49:            | iconst_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53*:           | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 44

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [50]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | <b>true</b>                                                            |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <b>true</b>                                                            |
| 49:            | iconst_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71*:           | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |



run: Step 45

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [49]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | <b>true</b>                                                            |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <b>true</b>                                                            |
| 49:            | iconst_1                                                               |
| annotation:    | <i>true</i> = <i>s</i> <sub>0</sub> / <i>haveRead</i> = <i>false</i>   |
| 50*:           | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 46

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [46]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | <b>true</b>                                                            |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <i>haveRead</i> = <i>false</i>                                         |
| 49*:           | iconst_1                                                               |
| annotation:    | <i>true</i> = <i>s</i> <sub>0</sub> / <i>haveRead</i> = <i>false</i>   |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |



run: Step 47

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [45]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | <b>true</b>                                                            |
| 45:            | iconst_0                                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$                   |
| 46*:           | if_icmpne 56                                                           |
| annotation:    | <i>haveRead</i> = <i>false</i>                                         |
| 49:            | iconst_1                                                               |
| annotation:    | <i>true</i> = <i>s</i> <sub>0</sub> / <i>haveRead</i> = <i>false</i>   |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 48

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [42]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 41:            | astore_3                                                               |
| annotation:    | <b>true</b>                                                            |
| 42:            | getstatic 61                                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$                     |
| 45*:           | iconst_0                                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$                   |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <i>haveRead</i> = <i>false</i>                                         |
| 49:            | iconst_1                                                               |
| annotation:    | <i>true</i> = <i>s</i> <sub>0</sub> / <i>haveRead</i> = <i>false</i>   |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 49

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [41]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | <b>true</b>                                            |
| 25:            | ldc 45                                                 |
| annotation:    | <b>true</b>                                            |
| 27:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 30:            | aload_1                                                |
| annotation:    | <b>true</b>                                            |
| 31:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 34:            | invokevirtual 49                                       |
| annotation:    | <b>true</b>                                            |
| 37:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 40:            | aload_1                                                |
| annotation:    | <b>true</b>                                            |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42*:           | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 50

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [40]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | <b>true</b>                                                            |
| 27:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 30:            | aload_1                                                                |
| annotation:    | <b>true</b>                                                            |
| 31:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 34:            | invokevirtual 49                                                       |
| annotation:    | <b>true</b>                                                            |
| 37:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 40:            | aload_1                                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 41*:           | astore_3                                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 42:            | getstatic 61                                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$                     |
| 45:            | iconst_0                                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$                   |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <i>haveRead</i> = <i>false</i>                                         |
| 49:            | iconst_1                                                               |
| annotation:    | <i>true</i> = <i>s</i> <sub>0</sub> / <i>haveRead</i> = <i>false</i>   |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 51

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [37]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | <b>true</b>                                            |
| 25:            | ldc 45                                                 |
| annotation:    | <b>true</b>                                            |
| 27:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 30:            | aload_1                                                |
| annotation:    | <b>true</b>                                            |
| 31:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 34:            | invokevirtual 49                                       |
| annotation:    | <b>true</b>                                            |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40*:           | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 52

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [34]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | <b>true</b>                                            |
| 25:            | ldc 45                                                 |
| annotation:    | <b>true</b>                                            |
| 27:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 30:            | aload_1                                                |
| annotation:    | <b>true</b>                                            |
| 31:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37*:           | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 53

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [31]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | <b>true</b>                                            |
| 25:            | ldc 45                                                 |
| annotation:    | <b>true</b>                                            |
| 27:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 30:            | aload_1                                                |
| annotation:    | <b>true</b>                                            |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34*:           | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 54

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [30]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | <b>true</b>                                            |
| 25:            | ldc 45                                                 |
| annotation:    | <b>true</b>                                            |
| 27:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31*:           | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 55

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [27]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | <b>true</b>                                            |
| 25:            | ldc 45                                                 |
| annotation:    | <b>true</b>                                            |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30*:           | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 56

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| current update | queue: [25]                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 0:             | ldc 25                                                                 |
| annotation:    | <b>true</b>                                                            |
| 2:             | astore_1                                                               |
| annotation:    | <b>true</b>                                                            |
| 3:             | getstatic 31                                                           |
| annotation:    | <b>true</b>                                                            |
| 6:             | new 33                                                                 |
| annotation:    | <b>true</b>                                                            |
| 9:             | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 10:            | invokespecial 34                                                       |
| annotation:    | <b>true</b>                                                            |
| 13:            | ldc 36                                                                 |
| annotation:    | <b>true</b>                                                            |
| 15:            | invokevirtual 40                                                       |
| annotation:    | <b>true</b>                                                            |
| 18:            | aload_0                                                                |
| annotation:    | <b>true</b>                                                            |
| 19:            | getfield 18                                                            |
| annotation:    | <b>true</b>                                                            |
| 22:            | invokevirtual 43                                                       |
| annotation:    | <b>true</b>                                                            |
| 25:            | ldc 45                                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 27*:           | invokevirtual 40                                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 30:            | aload_1                                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 31:            | invokevirtual 40                                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 34:            | invokevirtual 49                                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 37:            | invokevirtual 55                                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 40:            | aload_1                                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 41:            | astore_3                                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                 |
| 42:            | getstatic 61                                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$                     |
| 45:            | iconst_0                                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$                   |
| 46:            | if_icmpne 56                                                           |
| annotation:    | <i>haveRead</i> = <i>false</i>                                         |
| 49:            | iconst_1                                                               |
| annotation:    | <i>true</i> = <i>s</i> <sub>0</sub> / <i>haveRead</i> = <i>false</i>   |
| 50:            | putstatic 61                                                           |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 53:            | goto 74                                                                |
| annotation:    | <b>true</b>                                                            |
| 56:            | getstatic 64                                                           |
| annotation:    | <b>true</b>                                                            |
| 59:            | dup                                                                    |
| annotation:    | <b>true</b>                                                            |
| 60:            | ldc 66                                                                 |
| annotation:    | <b>true</b>                                                            |
| 62:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 65:            | ldc 68                                                                 |
| annotation:    | <b>true</b>                                                            |
| 67:            | invokevirtual 55                                                       |
| annotation:    | <b>true</b>                                                            |
| 70:            | iconst_m1                                                              |
| annotation:    | <b>true</b>                                                            |
| 71:            | invokestatic 72                                                        |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 74:            | aload_3                                                                |
| annotation:    | <i>true</i> = <i>sf</i> <sub>61</sub> / <i>haveRead</i> = <i>false</i> |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>                  |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 75:            | invokestatic 78                                                        |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 78:            | astore_2                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 79:            | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 80:            | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 83:            | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 84:            | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 87:            | ldc 80                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 89:            | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 92:            | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 93:            | getfield 18                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 96:            | invokevirtual 43                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 99:            | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 102:           | invokevirtual 86                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 105:           | invokevirtual 92                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 108:           | aload_2                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 109:           | bipush 10                                                              |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 111:           | invokevirtual 94                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 114:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 117:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 118:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 121:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 122:           | invokevirtual 97                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 125:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 128:           | ldc 99                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 130:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 133:           | aload_0                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 134:           | getfield 16                                                            |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 137:           | invokevirtual 104                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 140:           | goto 169                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 143:           | astore_1                                                               |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 144:           | getstatic 31                                                           |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 147:           | new 33                                                                 |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 150:           | dup                                                                    |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 151:           | invokespecial 34                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 154:           | ldc 106                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 156:           | invokevirtual 40                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 159:           | aload_1                                                                |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 160:           | invokevirtual 109                                                      |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 163:           | invokevirtual 49                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 166:           | invokevirtual 55                                                       |
| annotation:    | <i>haveRead</i> = <i>sf</i> <sub>61</sub>                              |
| 169:           | return                                                                 |

run: Step 57

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [22]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | <b>true</b>                                            |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25*:           | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 58

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [19]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | <b>true</b>                                            |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22*:           | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 59

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [18]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | <b>true</b>                                            |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19*:           | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 60

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [15]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | <b>true</b>                                            |
| 15:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18*:           | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 61

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [13]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | <b>true</b>                                            |
| 13:            | ldc 36                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15*:           | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 62

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [10]                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 10:            | invokespecial 34                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 13*:           | ldc 36                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 63

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [9]                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | <b>true</b>                                            |
| 9:             | dup                                                    |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 10*:           | invokespecial 34                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 13:            | ldc 36                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 64

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [6]                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | <b>true</b>                                            |
| 3:             | getstatic 31                                           |
| annotation:    | <b>true</b>                                            |
| 6:             | new 33                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 9*:            | dup                                                    |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 10:            | invokespecial 34                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 13:            | ldc 36                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 65

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [3]                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | true                                                   |
| 2:             | astore_1                                               |
| annotation:    | true                                                   |
| 3:             | getstatic 31                                           |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 6*:            | new 33                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 9:             | dup                                                    |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 10:            | invokespecial 34                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 13:            | ldc 36                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | true                                                   |
| 56:            | getstatic 64                                           |
| annotation:    | true                                                   |
| 59:            | dup                                                    |
| annotation:    | true                                                   |
| 60:            | ldc 66                                                 |
| annotation:    | true                                                   |
| 62:            | invokevirtual 55                                       |
| annotation:    | true                                                   |
| 65:            | ldc 68                                                 |
| annotation:    | true                                                   |
| 67:            | invokevirtual 55                                       |
| annotation:    | true                                                   |
| 70:            | iconst_m1                                              |
| annotation:    | true                                                   |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |



run: Step 66

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [2]                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | ldc 25                                                 |
| annotation:    | <b>true</b>                                            |
| 2:             | astore_1                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 3*:            | getstatic 31                                           |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 6:             | new 33                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 9:             | dup                                                    |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 10:            | invokespecial 34                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 13:            | ldc 36                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | aload_0                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | getfield 18                                            |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | invokevirtual 43                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | ldc 45                                                 |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | invokevirtual 40                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | invokevirtual 49                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | invokevirtual 55                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | aload_1                                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | astore_3                                               |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | getstatic 61                                           |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | iconst_0                                               |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | if_icmpne 56                                           |
| annotation:    | $haveRead = false$                                     |
| 49:            | iconst_1                                               |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | putstatic 61                                           |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | goto 74                                                |
| annotation:    | <b>true</b>                                            |
| 56:            | getstatic 64                                           |
| annotation:    | <b>true</b>                                            |
| 59:            | dup                                                    |
| annotation:    | <b>true</b>                                            |
| 60:            | ldc 66                                                 |
| annotation:    | <b>true</b>                                            |
| 62:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 65:            | ldc 68                                                 |
| annotation:    | <b>true</b>                                            |
| 67:            | invokevirtual 55                                       |
| annotation:    | <b>true</b>                                            |
| 70:            | iconst_m1                                              |
| annotation:    | <b>true</b>                                            |
| 71:            | invokestatic 72                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | aload_3                                                |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | invokestatic 78                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | astore_2                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | ldc 80                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | getfield 18                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | invokevirtual 43                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | invokevirtual 86                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | invokevirtual 92                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | aload_2                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | bipush 10                                              |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | invokevirtual 94                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | invokevirtual 97                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | ldc 99                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | aload_0                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | getfield 16                                            |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | invokevirtual 104                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | goto 169                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | astore_1                                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | getstatic 31                                           |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | new 33                                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | dup                                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | invokespecial 34                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | ldc 106                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | invokevirtual 40                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | aload_1                                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | invokevirtual 109                                      |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | invokevirtual 49                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | invokevirtual 55                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | return                                                 |

run: Step 67

|                |                                                        |
|----------------|--------------------------------------------------------|
| current update | queue: [0]                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 0:             | <b>ldc</b> 25                                          |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 2*:            | <b>astore</b> .1                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 3:             | <b>getstatic</b> 31                                    |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 6:             | <b>new</b> 33                                          |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 9:             | <b>dup</b>                                             |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 10:            | <b>invokespecial</b> 34                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 13:            | <b>ldc</b> 36                                          |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 15:            | <b>invokevirtual</b> 40                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 18:            | <b>aload</b> .0                                        |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 19:            | <b>getfield</b> 18                                     |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 22:            | <b>invokevirtual</b> 43                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 25:            | <b>ldc</b> 45                                          |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 27:            | <b>invokevirtual</b> 40                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 30:            | <b>aload</b> .1                                        |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 31:            | <b>invokevirtual</b> 40                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 34:            | <b>invokevirtual</b> 49                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 37:            | <b>invokevirtual</b> 55                                |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 40:            | <b>aload</b> .1                                        |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 41:            | <b>astore</b> .3                                       |
| annotation:    | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$ |
| 42:            | <b>getstatic</b> 61                                    |
| annotation:    | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$     |
| 45:            | <b>iconst</b> .0                                       |
| annotation:    | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$   |
| 46:            | <b>if_icmpne</b> 56                                    |
| annotation:    | $haveRead = false$                                     |
| 49:            | <b>iconst</b> .1                                       |
| annotation:    | $true = s_0 / haveRead = false$                        |
| 50:            | <b>putstatic</b> 61                                    |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 53:            | <b>goto</b> 74                                         |
| annotation:    | <b>true</b>                                            |
| 56:            | <b>getstatic</b> 64                                    |
| annotation:    | <b>true</b>                                            |
| 59:            | <b>dup</b>                                             |
| annotation:    | <b>true</b>                                            |
| 60:            | <b>ldc</b> 66                                          |
| annotation:    | <b>true</b>                                            |
| 62:            | <b>invokevirtual</b> 55                                |
| annotation:    | <b>true</b>                                            |
| 65:            | <b>ldc</b> 68                                          |
| annotation:    | <b>true</b>                                            |
| 67:            | <b>invokevirtual</b> 55                                |
| annotation:    | <b>true</b>                                            |
| 70:            | <b>iconst</b> .m1                                      |
| annotation:    | <b>true</b>                                            |
| 71:            | <b>invokestatic</b> 72                                 |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 74:            | <b>aload</b> .3                                        |
| annotation:    | $true = sf_{61} / haveRead = false$                    |
| 170:           | <SET haveRead T0 haveRead = false -> haveRead = true>  |
| annotation:    | $haveRead = sf_{61}$                                   |
| 75:            | <b>invokestatic</b> 78                                 |
| annotation:    | $haveRead = sf_{61}$                                   |
| 78:            | <b>astore</b> .2                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 79:            | <b>aload</b> .2                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 80:            | <b>new</b> 33                                          |
| annotation:    | $haveRead = sf_{61}$                                   |
| 83:            | <b>dup</b>                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 84:            | <b>invokespecial</b> 34                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 87:            | <b>ldc</b> 80                                          |
| annotation:    | $haveRead = sf_{61}$                                   |
| 89:            | <b>invokevirtual</b> 40                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 92:            | <b>aload</b> .0                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 93:            | <b>getfield</b> 18                                     |
| annotation:    | $haveRead = sf_{61}$                                   |
| 96:            | <b>invokevirtual</b> 43                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 99:            | <b>invokevirtual</b> 49                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 102:           | <b>invokevirtual</b> 86                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 105:           | <b>invokevirtual</b> 92                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 108:           | <b>aload</b> .2                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 109:           | <b>bipush</b> 10                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 111:           | <b>invokevirtual</b> 94                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 114:           | <b>goto</b> 169                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 117:           | <b>astore</b> .1                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 118:           | <b>getstatic</b> 31                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 121:           | <b>aload</b> .1                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 122:           | <b>invokevirtual</b> 97                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 125:           | <b>getstatic</b> 31                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 128:           | <b>ldc</b> 99                                          |
| annotation:    | $haveRead = sf_{61}$                                   |
| 130:           | <b>invokevirtual</b> 55                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 133:           | <b>aload</b> .0                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 134:           | <b>getfield</b> 16                                     |
| annotation:    | $haveRead = sf_{61}$                                   |
| 137:           | <b>invokevirtual</b> 104                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 140:           | <b>goto</b> 169                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 143:           | <b>astore</b> .1                                       |
| annotation:    | $haveRead = sf_{61}$                                   |
| 144:           | <b>getstatic</b> 31                                    |
| annotation:    | $haveRead = sf_{61}$                                   |
| 147:           | <b>new</b> 33                                          |
| annotation:    | $haveRead = sf_{61}$                                   |
| 150:           | <b>dup</b>                                             |
| annotation:    | $haveRead = sf_{61}$                                   |
| 151:           | <b>invokespecial</b> 34                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 154:           | <b>ldc</b> 106                                         |
| annotation:    | $haveRead = sf_{61}$                                   |
| 156:           | <b>invokevirtual</b> 40                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 159:           | <b>aload</b> .1                                        |
| annotation:    | $haveRead = sf_{61}$                                   |
| 160:           | <b>invokevirtual</b> 109                               |
| annotation:    | $haveRead = sf_{61}$                                   |
| 163:           | <b>invokevirtual</b> 49                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 166:           | <b>invokevirtual</b> 55                                |
| annotation:    | $haveRead = sf_{61}$                                   |
| 169:           | <b>return</b>                                          |

run: Step 68

|                       |                                                                               |
|-----------------------|-------------------------------------------------------------------------------|
| current update queue: | ␣                                                                             |
| annotation:           | $haveRead = sf_{61} / (\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false)$ |
| 0*:                   | <b>ldc</b> 25                                                                 |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 2:                    | <b>astore_1</b>                                                               |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 3:                    | <b>getstatic</b> 31                                                           |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 6:                    | <b>new</b> 33                                                                 |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 9:                    | <b>dup</b>                                                                    |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 10:                   | <b>invokespecial</b> 34                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 13:                   | <b>ldc</b> 36                                                                 |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 15:                   | <b>invokevirtual</b> 40                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 18:                   | <b>aload_0</b>                                                                |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 19:                   | <b>getfield</b> 18                                                            |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 22:                   | <b>invokevirtual</b> 43                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 25:                   | <b>ldc</b> 45                                                                 |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 27:                   | <b>invokevirtual</b> 40                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 30:                   | <b>aload_1</b>                                                                |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 31:                   | <b>invokevirtual</b> 40                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 34:                   | <b>invokevirtual</b> 49                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 37:                   | <b>invokevirtual</b> 55                                                       |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 40:                   | <b>aload_1</b>                                                                |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 41:                   | <b>astore_3</b>                                                               |
| annotation:           | $\neg(\neg(sf_{61} = 0)) \rightarrow haveRead = false$                        |
| 42:                   | <b>getstatic</b> 61                                                           |
| annotation:           | $\neg(\neg(s_0 = 0)) \rightarrow haveRead = false$                            |
| 45:                   | <b>iconst_0</b>                                                               |
| annotation:           | $\neg(\neg(s_1 = s_0)) \rightarrow haveRead = false$                          |
| 46:                   | <b>if_icmpne</b> 56                                                           |
| annotation:           | $haveRead = false$                                                            |
| 49:                   | <b>iconst_1</b>                                                               |
| annotation:           | $true = s_0 / haveRead = false$                                               |
| 50:                   | <b>putstatic</b> 61                                                           |
| annotation:           | $true = sf_{61} / haveRead = false$                                           |
| 53:                   | <b>goto</b> 74                                                                |
| annotation:           | <b>true</b>                                                                   |
| 56:                   | <b>getstatic</b> 64                                                           |
| annotation:           | <b>true</b>                                                                   |
| 59:                   | <b>dup</b>                                                                    |
| annotation:           | <b>true</b>                                                                   |
| 60:                   | <b>ldc</b> 66                                                                 |
| annotation:           | <b>true</b>                                                                   |
| 62:                   | <b>invokevirtual</b> 55                                                       |
| annotation:           | <b>true</b>                                                                   |
| 65:                   | <b>ldc</b> 68                                                                 |
| annotation:           | <b>true</b>                                                                   |
| 67:                   | <b>invokevirtual</b> 55                                                       |
| annotation:           | <b>true</b>                                                                   |
| 70:                   | <b>iconst_m1</b>                                                              |
| annotation:           | <b>true</b>                                                                   |
| 71:                   | <b>invokestatic</b> 72                                                        |
| annotation:           | $true = sf_{61} / haveRead = false$                                           |
| 74:                   | <b>aload_3</b>                                                                |
| annotation:           | $true = sf_{61} / haveRead = false$                                           |
| 170:                  | <SET haveRead T0 haveRead = false -> haveRead = true>                         |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 75:                   | <b>invokestatic</b> 78                                                        |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 78:                   | <b>astore_2</b>                                                               |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 79:                   | <b>aload_2</b>                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 80:                   | <b>new</b> 33                                                                 |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 83:                   | <b>dup</b>                                                                    |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 84:                   | <b>invokespecial</b> 34                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 87:                   | <b>ldc</b> 80                                                                 |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 89:                   | <b>invokevirtual</b> 40                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 92:                   | <b>aload_0</b>                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 93:                   | <b>getfield</b> 18                                                            |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 96:                   | <b>invokevirtual</b> 43                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 99:                   | <b>invokevirtual</b> 49                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 102:                  | <b>invokevirtual</b> 86                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 105:                  | <b>invokevirtual</b> 92                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 108:                  | <b>aload_2</b>                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 109:                  | <b>bipush</b> 10                                                              |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 111:                  | <b>invokevirtual</b> 94                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 114:                  | <b>goto</b> 169                                                               |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 117:                  | <b>astore_1</b>                                                               |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 118:                  | <b>getstatic</b> 31                                                           |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 121:                  | <b>aload_1</b>                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 122:                  | <b>invokevirtual</b> 97                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 125:                  | <b>getstatic</b> 31                                                           |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 128:                  | <b>ldc</b> 99                                                                 |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 130:                  | <b>invokevirtual</b> 55                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 133:                  | <b>aload_0</b>                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 134:                  | <b>getfield</b> 16                                                            |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 137:                  | <b>invokevirtual</b> 104                                                      |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 140:                  | <b>goto</b> 169                                                               |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 143:                  | <b>astore_1</b>                                                               |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 144:                  | <b>getstatic</b> 31                                                           |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 147:                  | <b>new</b> 33                                                                 |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 150:                  | <b>dup</b>                                                                    |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 151:                  | <b>invokespecial</b> 34                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 154:                  | <b>ldc</b> 106                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 156:                  | <b>invokevirtual</b> 40                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 159:                  | <b>aload_1</b>                                                                |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 160:                  | <b>invokevirtual</b> 109                                                      |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 163:                  | <b>invokevirtual</b> 49                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 166:                  | <b>invokevirtual</b> 55                                                       |
| annotation:           | $haveRead = sf_{61}$                                                          |
| 169:                  | <b>return</b>                                                                 |