```java
1  import java.awt.event.ActionListener;

4
5  /**
6   * View interface.
7   *
8   * @author Bruce W. Weide
9   */
10 public interface NNCalcView extends ActionListener {
11
12     /**
13      * Register argument as observer/listener of this; this must be done first,
14      * before any other methods of this class are called.
15      *
16      * @param controller
17      *            controller to register
18      */
19     void registerObserver(NNCalcController controller);
20
21     /**
22      * Updates top operand display based on NaturalNumber provided as argument.
23      *
24      * @param n
25      *            new value of top operand display
26      */
27     void updateTopDisplay(NaturalNumber n);
28
29     /**
30      * Updates bottom operand display based on NaturalNumber provided as
31      * argument.
32      *
33      * @param n
34      *            new value of bottom operand display
35      */
36     void updateBottomDisplay(NaturalNumber n);
37
38     /**
39      * Updates display of whether subtract operation is allowed.
40      *
41      * @param allowed
42      *            true iff subtract is allowed
43      */
44     void updateSubtractAllowed(boolean allowed);
45
46     /**
47      * Updates display of whether divide operation is allowed.
48      *
49      * @param allowed
50      *            true iff divide is allowed
51      */
52     void updateDivideAllowed(boolean allowed);
53
54     /**
55      * Updates display of whether power operation is allowed.
56      *
57      * @param allowed
58      *            true iff power is allowed
59      */
```

```
60     void updatePowerAllowed(boolean allowed);
61
62     /**
63      * Updates display of whether root operation is allowed.
64      *
65      * @param allowed
66      *            true iff root is allowed
67      */
68     void updateRootAllowed(boolean allowed);
69
70 }
71
```