```java
 1 import components.sequence.Sequence;
 2 import components.sequence.Sequence1L;
 3
 4 public class HW3_2231 {
 5
 6     public static void main(String[] args) {
 7         // TODO Auto-generated method stub
 8
 9     }
10
11     /**
12      * Smooths a given {@code Sequence<Integer>}.
13      *
14      * @param s1
15      *            the sequence to smooth
16      * @param s2
17      *            the resulting sequence
18      *
19      * @replaces s2
20      * @requires |s1| >= 1
21      * @ensures <pre>
22      * |s2| = |s1| - 1  and
23      *  for all i, j: integer, a, b: string of integer
24      *      where (s1 = a * <i> * <j> * b)
25      *    (there exists c, d: string of integer
26      *        (|c| = |a|  and
27      *         s2 = c * <(i+j)/2> * d))
28      * </pre>
29      */
30     public static Sequence<Integer> smooth(Sequence<Integer> s) {
31
32         Sequence<Integer> result = new Sequence1L<>();
33         for (int i = 0; i < s.length() - 1; i++) {
34             int trans1 = s.entry(i);
35             int trans2 = s.entry(i + 1);
36             int avg = (trans1 + trans2) / 2;
37             result.add(i, avg);
38         }
39
40         return result;
41     }
42
43     public static Sequence<Integer> smooth2(Sequence<Integer> s) {
44         int l = s.length();
45
46         if (s.length() <= 1) {
47             return new Sequence1L<>();
48         } else {
49             int trans1 = s.entry(0);
50             int trans2 = s.entry(1);
51             Sequence<Integer> temp = new Sequence1L<>();
52             for (int i = 0; i < l; i++) {
53                 temp.add(i, s.entry(i + 1));
54             }
55             Sequence<Integer> result = smooth(temp);
56
57             int avg = (trans1 + trans2) / 2;
58             result.add(0, avg);
59
```

```
60              return result;
61          }
62
63      }
64
65 }
66
```