```
1   /*
2    * HSR - Uebungen 'Algorithmen & Datenstrukturen 1'
3    * Version: Tue Feb 12 12:02:24 CET 2019
4    */
5
6   package uebung01.ml.aufgabe03;
7
8   import static java.lang.System.out;
9
10  public class Sequence {
11
12    public static void main(String[] args) {
13      for (int n = 1; n <= 5; n++) {
14        out.println("n = " + n);
15        out.println("  recursive: " + recursive(n));
16        out.println("  iterative: " + iterative(n));
17        out.println("  explicit:  " + explicit(n));
18      }
19    }
20
21    static int recursive(int n) {
22      if (n == 1)
23        return 5;
24      else
25        return recursive(n - 1) + 8;
26    }
27
28    static int iterative(int n) {
29      int a1 = 5;
30      int sum = 0;
31      for (int i = 2; i <= n; i++) {
32        sum += 8;
33      }
34      return a1 + sum;
35    }
36
37    static int explicit(int n) {
38      return 8 * n - 3;
39    }
40
41  }
42
43  /* Session-Log:
44
45  n = 1
46    recursive: 5
47    iterative: 5
48    explicit:  5
49  n = 2
50    recursive: 13
51    iterative: 13
52    explicit:  13
53  n = 3
54    recursive: 21
55    iterative: 21
56    explicit:  21
57  n = 4
58    recursive: 29
59    iterative: 29
60    explicit:  29
61  n = 5
62    recursive: 37
63    iterative: 37
64    explicit:  37
65
66  */
67
68
```