

TestNotes/pset1/RecursiveSum.java

```
1 // RecursiveSum.java
2
3 /**
4  * Recursive method that computes the sum of the first n integers.
5  * PSET1: Exercise 7
6  *
7  * @author Kuljit Takhar
8  * @version Last modified 19_Sept_2023
9  *
10 **/
11
12 public class RecursiveSum {
13     public static void main(String[] args) {
14         try {
15             int n = 5;
16             double result = sumTo(n);
17             System.out.println("sumTo(" + n + ") = " + result);
18         } catch (IllegalArgumentException e) {
19             System.out.println("IllegalArgumentException: " + e.getMessage());
20         }
21     }
22
23     public static double sumTo(int n) {
24         if (n < 0) {
25             throw new IllegalArgumentException("Input must be non-negative.");
26         } else if (n == 0) {
27             return 0.0;
28         } else {
29             return 1.0 / n + sumTo(n - 1);
30         }
31     }
32 }
```