

```

1  /**
2   * Main
3   */
4  public class Main {
5
6      public static void main(String[] args) {
7
8          // circle
9          System.out.println("Area of circle: " + AreaCalculator.area(5.0)); // Area of circle: 78.539815
10
11         // rectangle
12         System.out.println("Area of rectangle: " + AreaCalculator.area(5.0, 7.0)); // Area of rectangle: 35.0
13     }
14 }
15
16
17 /**
18  * AreaCalculator
19  *
20  * area(double radius)    -> circle
21  * area(double x, double y) -> rectangle
22  */
23 class AreaCalculator {
24
25     // == constants ==
26     private static final double PI = 3.1415926d;
27
28
29     // == public methods ==
30
31     /**
32      * Calculate the area (circle)
33      * @param radius
34      * @return area
35      */
36     public static double area(double radius) {
37
38         if(radius < 0) {
39             return -1.0d;
40         }
41
42         double area = Math.pow((2.0d * radius), 2) * PI / 4; // Math.pow(x, y) = x^y = power
43
44         return area;
45     }
46
47
48     /**
49      * Calculate the area (rectangle)
50      * @param x
51      * @param y
52      * @return area
53      */
54     public static double area(double x, double y) {
55         if(x < 0 || y < 0) {
56             return -1.0d;
57         }
58
59         return x * y;
60     }
61 }
62

```