

```

1  /**
2   * Class ComplexNumber adds, subtracts, and multiplies complex numbers.
3   *
4   * @author (Yaw Abaaho)
5   * @version (4/22/19)
6   */
7  public class ComplexNumber
8  {
9      double rPart;
10     double iPart;
11     public ComplexNumber(double rPart, double iPart)
12     {
13         this.rPart = rPart;
14         this.iPart = iPart;
15     }
16
17     public ComplexNumber add(ComplexNumber other)
18     {
19         double real = this.rPart + other.getrPart();
20         double imaginary = this.iPart + other.getiPart();
21
22         return new ComplexNumber(real,imaginary);
23     }
24
25     public ComplexNumber subtract(ComplexNumber other)
26     {
27         double real = this.rPart - other.getrPart();
28         double imaginary = this.iPart - other.getiPart();
29
30         return new ComplexNumber(real,imaginary);
31     }
32
33     public ComplexNumber multiply(ComplexNumber other)
34     {
35         double real = this.rPart * other.getrPart();
36         double imaginary = this.iPart * other.getiPart();
37
38         return new ComplexNumber(real,imaginary);
39     }
40
41     public double getrPart()
42     {
43         return rPart;
44     }
45
46     public double getiPart()
47     {
48         return iPart;
49     }
50
51     public String toString()
52     {
53         return rPart + "+" + iPart + "i";
54     }
55 }

```