```java
/**
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 * On the main method we are testing if our constructor methods are working for
addition , subtraction
 * multiplication and negative. Also testing get and set methods, constructor and
we use if else for boolean
 */
package assg2_kimj19;

public class ComplexNumDemo {

	public static void main(String[] args) {
			// Testing the constructor
		ComplexNum c1 = new ComplexNum();
		ComplexNum c2 = new ComplexNum(1,1);
		ComplexNum c3 = new ComplexNum (2,2);
		ComplexNum c4 = new ComplexNum(0,1);

		// Testing the get methods
		System.out.println("testing get methods");
		System.out.println("c1's real number" + c1.getReal() );
		System.out.println("c2's imaginary number" + c2.getImaginary());
		//Testing the set methods
		System.out.println("\nTesting set methods");
		c1.setReal(4.1);
		System.out.println("c3's real number" + c3.getReal());
		c1.setImaginary(5.1);
		System.out.println("c4's imaginary number" + c4.getImaginary());
		// Testing addition
		System.out.println("\nTesting addition");
		c1 =c2.add(c4);
		System.out.println("c2 + c4 = " + c1);
		c1 = c3.add(c2);
		System.out.println("c2 + c4 = " + c1); // 2nd test for addition
		// Testing subtraction
		System.out.println("\nTesting subtraction");
		c1 =c2.sub(c4);
		System.out.println("c2 - c4 = " + c1);
		c1 = c3.sub(c2);
		System.out.println("c2 - c4 = " + c1);
		// Testing multiplication
		System.out.println("\nTesting multiplication");
		c1 =c2.mul(c4);
		System.out.println("c2 * c4 = " + c1);
		c1 = c3.mul(c2);
		System.out.println("c2 * c4 = " + c1);
		// Testing negative number
		System.out.println("\nTesting negative numbers");
		c1 =c2.neg(c4);
		System.out.println("To negate of " + c1); // I put negate hencing for the
negative
		c1 = c3.neg(c2);
		System.out.println("To negate of " + c1);
		//Testing toString
		System.out.println("\nTesting toString");
		System.out.println("c1's information:");
		System.out.println(c1.toString());
```

```java
        System.out.println("c2's information:");
        System.out.println(c2.toString());      // automatically call the toString
method
        System.out.println();
        // Testing boolean method
        System.out.println("\nTesting the boolean method");
        if (c1.equals(c2))
            System.out.println("c1 and c2 are equal");
        else
            System.out.println("c1 and c2 are not equal");

        if (c2.equals(c3))
            System.out.println("c2 and c3 are equal");
        else
            System.out.println("c2 and c3 are not equal");

        if (c3.equals(c4))
            System.out.println("c3 and c4 are equal");
        else
            System.out.println("c3 and c4 are not equal");
        System.out.println();




    }

}
```