

Classes & Objects Practice

Ch. 7

```
public class TreeTest{
    public static void main(String[] args){
        Tree t1 = new Tree("Redwood", 380, 'E');
        Tree t2 = new Tree("Redwood", 380, 'E');
        System.out.println(t1 == t2);
    }
}
```

What is printed out
by this program?

```
public class TreeTest{
    public static void main(String[] args){
        Tree t1 = new Tree("Redwood", 380, 'E');
        Tree t2 = new Tree("Douglas Fir", 327);
        Tree t3 = new Tree("Live Oak", 'E');
        Tree t4 = new Tree("Japanese Maple", 'D');
        Tree t5 = new Tree("Sequoia", 286, 'E');
    }
}
```

How many constructors from the Tree class are being used in this code program?

```
// Add a method, inc(), to increment a Time value by 1
// second. min and sec should not reach 60 or above.
public class Time {
    private int hour, min, sec;
    Time(int hour, int min, int sec) {
        this.hour = hour;
        this.min = min;
        this.sec = sec;
    }
    // your method goes here
```

```
public class CatTest{
    public static void main(String[] args){
        Cat captain = new Cat(true);
        Cat snow = new Cat(false);

        goOutside(snow);
        captain = snow;
        System.out.println(snow.livesLeft);
    }
    public static void goOutside(Cat c){
        c.die();
        Cat d = c;
        d.die();
    }
}
```

```
public class Cat{
    int livesLeft;
    boolean domestic;
    Cat(boolean d){
        livesLeft = 9;
        domestic = d;
    }
    void die(){
        livesLeft--;
    }
}
```

What is printed out by this program?

```
public class Test6{
    public static void main(String[] args){
        Town sc = new Town(65000, "Santa Cruz");
        Town ca = new Town(10000, "Capitola");
        Town ap = new Town(6000, "Aptos");

        Town ab = sc;
        ca = ab;

        ab.mutate();
        sc.mutate();

        System.out.println(ca.population);
    }
}
```

```
public class Town{
    int population;
    String name;
    Town(int p, String n){
        population = p;
        name = n;
    }
    public void mutate() {
        population /= 2;
    }
}
```

```
public class Town{
    int population;
    static int cityID = 0;
    String name;
    Town(int p, String n){
        population = p;
        name = n;
        cityID++;
    }
}

public class Test6{
    public static void main(String[] args){
        Town sc = new Town(65000, "Santa Cruz");
        Town ca = new Town(10000, "Capitola");
        Town ap = new Town(6000, "Aptos");
        System.out.println(sc.cityID);
    }
}
```

What is printed out
by this program?

```
// Write a class called Rational. Rational will consist
// of a numerator and a denominator – both fields are
// private. Rational will also have a method called times
// that will multiply one Rational number by another, and
// return the result as a Rational number. It is not
// necessary to reduce fractions to lowest terms.
```



```
// Complete the code below such that an array of 20 point
// objects is initialized with random x and y values
// between 0 and 10.
public class PointTest{
    public static void main(String[] args){
        // Your code goes here

    }
}
```

```
public class Point{
    double x;
    double y;
    Point(double x, double y){
        this.x = x;
        this.y = y;
    }
}
```