Homework #22B Answer Key – P. 244 – 5 / 4.2, 4.6 P. 247 – 8 / 4.4, 4.5 P. 250 / 4.19, 4.21, 4.22

P. 244 – 5

4.2) C) the toString method is called on the object to get the string to print

4.6) D) more than one method with the same name

P. 247 – 8

4.4) F

4.5) T

P. 250

4.19) Write a method called `floatEquals` that accepts three floating-point values as parameters. The method should return true if the first two parameters are equal within the tolerance of the third parameter. *Hint*: See the discussion in Chapter 3 on comparing floating-point values for equality.

```
public boolean floatEquals (double float1, double float2,
                            double tolerance)
{
   return (Math.abs(float1 - float2) <= tolerance);
}
```

4.21) Write a method called `isIsoceles` that accepts three integer parameters that represent the lengths of the sides of a triangle. The method returns true if the triangle is isosceles but not equilateral (meaning that exactly two of the sides have an equal length), and false otherwise.

```
public boolean isIsoceles (int side1, int side2, int side3)
{
   boolean result = false;

   if ( (side1 == side2) && side1 != side3) ||
        (side2 == side3) && side2 != side1) ||
        (side1 == side3) && side1 != side2) )
         result = true;

   return result;
}
```

4.22) Write a method called `randomInRange` that accepts two integer parameters representing a range. The method should return a random integer in the specified range (inclusive). Return zero if the first parameter is greater than the second.

```
// assumes java.util.Random is imported
public int randomInRange (int first, int second)
{
   int result = 0;
   Random generator = new Random();

   if (first <= second)
   {
      int range = second – first + 1;
      result = generator.nextInt(range) + first;
   }

   return result;
}
```