I.

```java
public class MethodF {
    public static void main(String[] args) {
        int i, j;
        i = 1;
        i = f(3);
        System.out.println("f(3) = " + i);
        System.out.println("f(4) = " + f(4));
        j = 2;
        System.out.println("f(j) = " + f(j));
        System.out.println("f(3)+f(4) = " + (f(3)+f(4)));
        System.out.println("f(f(2)) = " + f(f(2)));
    }

    public static int f(int x) {
        return 2*x+1;
    }
}
```

a. Predicate the output of this program. Use pen and paper only.

b. Try this program in jGrasp. Verify your results.
II. 
a. Write and use a method that determines the larger of two double values.

// Method header
public static double larger ( double x, double y)
{
    // Method body
    if(x > y)
        return x;
    else
        return y;
}

b. Write a program so that it prompts the user to input two doubles. Your program outputs the larger number. You must use the method larger you have written.

public class TestLarger
{
    public static void main(String[] args)
    {
    }

    // Method header
    public static double larger ( double x, double y)
    {
        // Method body
        if(x > y)
            return x;
        else
            return y;
    }
}

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III.

```java
public class TestRectangle
{
    public static void main(String [] args)
    {
        Rectangle r1, r2;
        int width;

        r1 = new Rectangle(3, 5);
        r1.print();
        System.out.println("r1: area="+r1.computeArea());
        System.out.println("r1: perimeter="+r1.computePerimeter());

        r1.setWidth(9);
        r1.print();

        r2 = new Rectangle();
        r2.print();

        width = r1.getWidth();
        r2.setWidth(width);
        r2.setLength(3);
        r2.print();
    }
}
```

a. Predicate the output of this program. Explain why. The class Rectangle can be downloaded from: 

b. Try this program in your computer. Verify your results.
   • You need to save TestRectangle.java and Rectangle.java in the same
   • Compile both files
   • Run TestRectangle.java. You cannot run Rectangle since there is no main
     method in the class Rectangle.

c. Add a new method Mass in the class Rectangle
   • The method is a value-returning method;
   • The method has one parameter, the density (ρ);
   • Given the density (ρ), the method computes the mass of the rectangle and returns the
     result. (Mass = density * Length * Width)
   • Compile both files before you run your program