Programming Assignment 3-4

Create Java classes for `Triangle, Rectangle,` and `Circle`. Provide each class with a method

```
public double computeArea()
```

Make all of these classes immutable. (Follow the guidelines in the slides for creating this type of class.) Provide one constructor for each class; the constructor should accept the data necessary to specify the figure, and to compute its area. The values accepted by the constructor should be stored in (private) instance fields of the class. For example, `Rectangle` should have instance fields `width` and `length`, and the constructor should look like this

```
public Rectangle(double width, double length)
```

For `Triangle`, you may use arguments `base` and `height`. And for `Circle`, use `radius` as the constructor arugment.

Whenever you create instance fields for one of these classes, provide public accessors for them (but do not provide mutators since the class is supposed to be immutable – for instance, the dimensions of a `Rectangle` should be read-only). For example, you will have in the `Rectangle` class:

```
private double width;

public double getWidth() {
      return width;
}
```

Create a fourth class `Main` that will, in its `main` method, test these three figure classes as follows: It will create one instance of each (you can make your own choice for the dimensions of your figures) and then print to the console the area of each. Typical output would be:

```
Area of Triangle is 34.75
Area of Rectangle is 36.0
Area of Circle is 58.57
```

Here are some area formulas, in case you do not remember them:

```
Area of a rectangle  =  width * height
Area of a triangle = 1/2 * base * height
Area of a circle = PI * radius * radius
```