Programming Assignment 4-5

This will be like Lab 4-4 – if you want, you can start with your code from Lab 4-4 and modify the code in your classes.

Create a Java-8 style interface `Polygon`, and place it in the `good` package (replacing the version of Polygon from Lab 4-4). As in 4-4, `Square, Triangle,` and `Rectangle` classes should implement `Polygon`.

`Polygon` should have one abstract method:

```
//returns in an array all sides of the polygon
//example: For a rectangle, return would be [width, width,
// length, length]
public double[] getArrayOfSides();
```

`Polygon` should have one static method

```
//returns the sum of the values in arr
static double sum(double[] arr)
```

`Polygon` should have one default method

```
//returns the perimeter of the polygon
default double computePerimeter()
```

Your `Rectangle, Triangle, Square` classes should *not* have a separate `computePerimeter` method, and should no longer implement the methods of the `Polygon` interface from Lab 4-4.

Create a `Test3` class that works like `Test2`:

Start with an array of `Polygons` – one `Rectangle`, one `Triangle`, one `Square`. Use these dimensions:

`Rectangle`: width = 3, length = 4
`Triangle`: sides are 4,5,6
`Square`: side = 3

The output message in the `Test3` main class should contain the number of sides and the perimeter of each of the objects in the given array. Here is expected output:

```
For this Square
  Perimeter = 12.0
For this Triangle
  Perimeter = 15.0
For this Rectangle
  Perimeter = 14.0
```