

Homework Assignment #4

1- Write a class called *Average* that can be used to calculate average of several integers. It should contain the following methods:

- A method that accepts two integer parameters and returns their average.
- A method that accepts three integer parameters and returns their average.
- A method that accepts two integer parameters that represent a range. Issue an error message and return zero if the second parameter is less than the first one. Otherwise, the method should return the average of the integers in that range (inclusive).

Implement the class and write a program to test its methods and submit your source code (.java files).

2- Declare a class called *Quadrilateral* that can be used to represent a quadrilateral. What instance variables are required? This class should include the following methods:

- Accessor and mutator methods. Notice that negative and zero lengths should not be accepted.
- A method called *isParallelogram* that returns a Boolean value indicating if the quadrilateral is a parallelogram.
- A method called *isRectangle* that indicates if the quadrilateral is a rectangle. This method should invoke the method *isParallelogram* and return a Boolean value.
- A method called *isSquare* that returns the Boolean value “true” if the quadrilateral is a square. This method should invoke the method *isRectangle* and return a Boolean value.

Implement the class and write a program to test its methods and submit your source code (.java files).