CSE 220 Homework Assignment 1

A) Questions

    i.   The inputs of 20 and 16 can not be divided as doubles since they are inputted as integers. The program would print 1. In order to print the correct value you'd need to replace 20 and 16 with 20.0 and 16.0 respectively

    ii.   Since "import" is a reserved term, the program won't post. It'll give you a syntax error until you change the name to something that isn't a reserved term like inVal.

    iii.   The integer can't contain double values as they do not fit in the allocated space for the integer. It will be a logic error and you need to change the values 10.0 and 2.0 to 10 and 2 respectively.

    iv.   Since the 5 and the 2 are added outside of parentheses, the program will interpret it as 52 instead of 7. To fix it you'd just have to put parentheses around it.

    v.   Using quotes inside the string cuts off the string and causes part of the string to not be considered string and would throw a syntax error. The fix would be to use \" for the quotes that are supposed to render.

B) Factorial Program

The goal was to create a program that will allow the user to input an integer greater than 1 and return the result. I transferred all the functionality to a secondary FactorialFunc method class that handles all the math and also stores the resultant value as a constructor. The main function also prints the resultant value by requesting it from the FactorialFunc's getter.

C) Area of a Triangle

The goal was to create a program that will ask the user to input 3 lengths, one for each side of the triangle, and it would then calculate the area based of this equation:

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

I created another class called Triangle which contains a constructor that performs all the math and the output for the program. As for the Main function, I have a static function that handles the input of the user ensuring that the values for the side lengths are greater than 0. Using a static function allows me to cut down on code length and I can reuse it easily.