

CSci 111 - Computer Science I

Fall 2022

Closed Lab 3

Programming Activity

Goal: Write a program that reads the lengths of the three sides of a triangle in inches, convert them into cm and calculates the area of the triangle. Check the sample output below.

Recall that the conversion from inches to cm: **1 inch = 2.54 cm**

You will use the following formula to calculate the area of a triangle given the lengths of its sides:

$$\text{area} = \sqrt{s(s-x)(s-y)(s-z)}$$

where x, y and z denote the sides of the triangle, and s is calculated as $s = (\frac{1}{2})(x + y + z)$
For this assignment, we will assume that all entries for x, y, and z produce a valid triangle.

You can name your program **Triangle.java**

When done, **raise your hand** to let the TA know that you are ready to demonstrate your code for grading.

```
// import statement(s), class header, and main method header

// declare variables for the inputs and outputs

// prompt for inputs

// calculate area

// display the outputs (2 decimal places)
```

Sample Output

```
Enter side x in inches: 4
Enter side y in inches: 5
Enter side z in inches: 6

For a triangle of sides 10.16 cm, 12.70 cm, and 15.24 cm
Area = 64.01 square cm
```

Notice: You need to submit **your program** in Blackboard. Click on **Closed Lab 3** link in Bb, click **Browse My Computer**, attach the program, then click **Submit**.