Java Foundations
Practices - Section 4

Problem 1: Writing methods

Overview

In this practice, you will write methods that return values for the following scenarios:

1. Converts given temperature in Fahrenheit to Celsius.

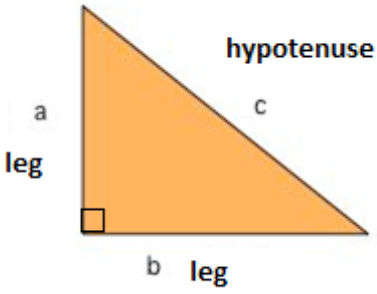
   Formula:

   `C=5/9*(F-32)`

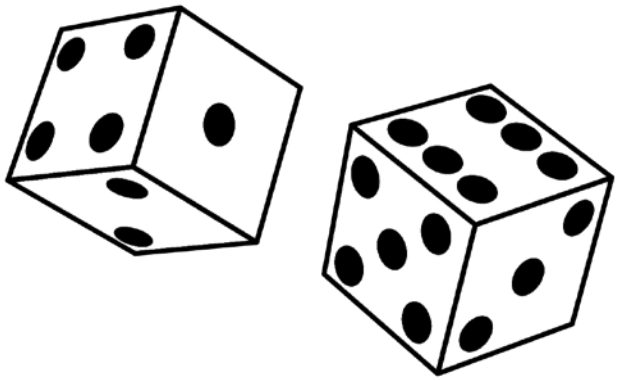
2. Computes the hypotenuse length of a triangle given its side lengths.

   Formula:



$$c = \sqrt{a^2 + b^2}$$

3. Simulate the rolling of two 6-sided dice and display their sum.



Task

You must implement the following:

1. Write a java file, `ComputeMethods.java` and define the following three methods:

```
public  double fToC(double degreesF)
public  double hypotenuse(int a, int b)
public int roll()
```

2. Write a second java file, `TestClass.java` and perform the following:

   Add a `main` method, in the `main` method:

   Create an instance of `ComputeMethods` and invoke the methods defined in `ComputeMethods.java` on this instance and display their results.

Expected Output:

```
Temp in celsius is 38.00000000000001
Hypotenuse is 10.816653826391969
The sum of the dice values is 9
```

The `ComputeMethods.java and TestClass.java` files are available to help you get started.

Problem 2: Process a name

Overview

In this practice, you will develop a java program that processes a name entered by the user. The program does the following:

It reads the user's first and last name (read an entire line as a single string), then prints the last name followed by a comma and the first initial. (Assume that the user types a valid name.)

Task

You must implement the following:

1. Have the user enter a name
2. Extract the first and last name from the name entered by the user
3. Use methods of `String` class to manipulate `name` as specified:
4. Display the name to the console

Expected Output:

```
Type your name: Jenny Weaver
Your name is: Weaver, J.
```

The `ProcessName.java` file is available to help you get started.