CSF
Hwk01
Methods of Modern Love

In this lab you will develop a number of simple arithmetic methods.

Using multBy2() as an example with an example input:
Run your method using: h1.multBy2(3) to determine what your method returns.
Run my solution using h1a.multBy2(3) to determine what the method should return.
Run a full test on your method using: h1t.multBy2() without giving a value. If it fails, you will get an input that it failed on. If it passes all the tests, you will get a success message.

1) Write method multBy2() that will multiply a double by 2. Ex: multBy2(5) -> 10.

2) Write method myMult() that will multiply two numbers together. Ex: myMult(2, 3) -> 6

3) Write method square() that will compute the square of a number. Ex: square(5) -> 25

4) Write method circleArea() that will return the area of a circle given the radius of that circle. Use square() to help you! Ex: circleArea(5) -> 78.539

5) Write method fToC() that takes a temperature in Fahrenheit and returns the equivalent temperature in Celsius. Note that you should use (5.0/9.0) in your formula – don't use (5/9). Ex: fToC(72) -> 72.22

6) Write method secToDistanceDrop() that given a time in seconds, determines the distance an object will fall in feet. Use square() to help you! Ex: secToDistanceDrop(7) -> 784.

7) Write method hypotLength() that returns the length of the hypotenuse of a triangle when given the lengths of the two shorter sides. Use your square() method to help you and also use Math.sqrt(), which returns the square root of a number. Ex: hypotLength(3, 4) -> 5.0

8) Write method triangleArea() that returns the area of any triangle when given the 3 side lengths. This method has 3 parameters. Look up "Heron's" formula for the correct equation. Note – you can make it easier to read by computing things in two steps, using an extra variable, You will need to use Math.sqrt(), which returns the square root of a number. Note: For the three sides to form a triangle, the sum of the two smallest sides must be greater than the longest side.
Ex: triangleArea(3,4,5) -> 6.0, triangleArea(6, 7,10) -> 20.66.

9) Write method ringArea() that returns the area of a ring formed by two concentric circles. It should take the radii of the two circles. You should assume the first parameter is the larger radius. Hint: Use your circleArea() method! Ex: ringArea(4,3) -> 21.99.