Exercise 1: Pythagorean Theorem

Write a program where the user will enter a value for a and for b, and it will calculate and return the value of c^2. Remember that:

$$a^2+b^2=c^2$$

Exercise 2: Slope Formula

Have the user enter four numbers: x1, y1, x2, and y2.

The computer will compute the slope with the formula:

$$m=\frac{y_2-y_1}{x_2-x_1}$$

And then print the answer to the screen.

Hint:
You can ensure the order of operations works as you wish in C++ by utilizing parenthesis in your math, as you would in algebra.

Exercise 3: Quadratic Formula

Have the user enter three numbers, **a**, **b**, and **c**. These are values in a polynomial:

$$ax^2+bx+c=0$$

Implement the quadratic formula in C++:

$$x=\frac{-b\pm\sqrt{(b^2-4ac)}}{2a}$$

And display the result to the user once it is computed.

Required: You will need to include the **cmath** library. This will allow you to use the **sqrt()** function.

Hint:
Calculate the numerator and denominator separately. There will also be two answers, due to the plus/minus in the equation.

Turn in

Once finished, upload your work in Desire2Learn, under **In-class Exercise 1**. I only need the **.cpp** source files. If it only allows you to upload one file, zip up your work and then submit the .zip file.