For Loops Challenge 12:
Quadratic Equation Solver App

Description:
You are responsible for writing a program that will display the solutions to any number of quadratic equations. Your program will ask the user how many quadratic equations they would like to solve, ask for the coefficients of the equation in the standard form of $ax^2 + bx + c = 0$, solve for x, and then display the solutions. Your program will allow for both real and complex solutions.

Step By Step Guide:

- Print a welcome summary to the user.
    - This summary should describe a quadratic equation and complex numbers.

- Get user input for how many quadratic equations they would like to solve.

- Loop through the number of equations. Each iteration, you should:
    - Print a message header stating the equation number you are solving.
    - Get user input for the values of the coefficients a, b, and c.
    - Solve for the roots of the quadratic x1 and x2.
        - In order to solve a quadratic equation, you may be required to take the square root of a negative value which would result in an imaginary number. The resulting solution is a complex number as it has both real and imaginary parts.
        - The previously introduced math library's sqrt() function works well for real numbers but not for imaginary numbers. To work with imaginary values and complex numbers we will need to import a library of extra code.
        - Type import cmath as the first line of code in your program.
    - Print a summary of the solutions to the equation.
- Once the loop is complete, print a message thanking the user for using the program.

- Use at least 2 comments to describe sections of your code.
- "Chunk" your code so that is readable.
- Use appropriate and informative variable names.
- Format your output as below.

Example Output:
Welcome to the Quadratic Equation Solver App.

A quadratic equation is of the form ax^2 + bx + c = 0
Your solutions can be real or complex numbers.
A complex number has two parts: a + bj
Where a is the real portion and bj is the imaginary portion.

How many equations would you like to solve today: 2

Solving equation #1

Please enter your value of a (coefficient of x^2): 1
Please enter your value of b (coefficient of x): 6
Please enter your value of c (coefficient): 9

The solutions to 1.0x^2 + 6.0x + 9.0 = 0 are:

x1 = (-3+0j)
x2 = (-3+0j)

Solving equation #2

Please enter your value of a (coefficient of x^2): 1
Please enter your value of b (coefficient of x): -5
Please enter your value of c (coefficient): 14.2

The solutions to 1.0x^2 + -5.0x + 14.2 = 0 are:

x1 = (2.5+2.819574435974337j)
x2 = (2.5-2.819574435974337j)

Thank you for using the Quadratic Equation Solver App. Goodbye.