

Assignment 11

Due: 6:00PM 12/4/23

Purpose: The purpose of this assignment is to gain experience in basic C++ syntax.

Your goal: Write C++ program to find the roots of a quadratic polynomial

$$Ax^2 + Bx + C = 0 \quad (1)$$

using the quadratic formula to find the roots. Your program should prompt the user to enter the **A**, **B**, and **C** coefficients of the quadratic polynomial and read the values of those coefficients in from STDIN. The program should use only real arithmetic but should handle the following four cases: two distinct real roots, two distinct complex roots (output the real and imaginary parts of each root), a single real root, and the case where **A=0** (the equation is linear and has only a single root).

Note: Make sure that your submission conforms to the **Instructions for Source Code Submission** instructions and that you have followed all of the **Good Programming Tips** in the notes!