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/**
 *   Name:      Thurlow, Taylor
 *   Project:    1
 *   Due:       10/12/16
 *   Course:     cs25602-f16
 *
 *   Description:
 *       This program asks the user for console input of three coefficients
 *       to be placed into the quadratic equation and computed. The program
 *       will output the constructed quadratic equation, and then both
 *       computed answers.
 **/

#include <iostream>
#include <math.h>

using namespace std;

int main() {
    double a, b, c;
    double x1, x2;
    string input;

    cout << "T. Thurlow's Quadratic Equation" << endl << endl;
    cout << "Please enter values for a, b, and c: ";
    cin >> a >> b >> c;

    // The following three blocks of code strip trailing zeroes from the
    // printed versions of a, b, and c. This is due to the fact that the
    // output of to_string() is not modifiable. C++11 comes in handy!

```

```

string printableA = to_string(a);
printableA.erase(printableA.find_last_not_of('0') + 1, string::npos);
if(printableA.back() == '.') printableA.pop_back();

string printableB = to_string(b);
printableB.erase(printableB.find_last_not_of('0') + 1, string::npos);
if(printableB.back() == '.') printableB.pop_back();

string printableC = to_string(c);
printableC.erase(printableC.find_last_not_of('0') + 1, string::npos);
if(printableC.back() == '.') printableC.pop_back();

// Legibly print the newly constructed quadratic equation

cout << printableA + " x^2 + " + printableB + " x + " + printableC + " = 0" << endl;

// Do each part (positive and negative) of the quadratic equation
// seperately, and store their answers in x1 and x2
x1 = ((-1 * b) + sqrt(pow(b, 2) - (4 * a * c))) / (2 * a);
x2 = ((-1 * b) - sqrt(pow(b, 2) - (4 * a * c))) / (2 * a);

cout << "x1 = " << x1 << endl;
cout << "x2 = " << x2 << endl;

return 0;
}

```