

```
1 // HACKER, MICHAEL
2 // CS1428.005
3 // ASSIGNMENT_01
4
5 #include <iostream>
6 #include <cmath>
7 using namespace std;
8
9 int main() {
10
11     float a, b, c, d, d1, d2, result1, result2;
12
13     cout << "Welcome to the quadratic equation calculator. Please enter the inputs." <<
endl;
14     cout << "Note: This machine does not support complex or imaginary roots." << endl;
15
16     cout << "Enter the coefficient for a: " << endl;
17     cin >> a;
18     cout << "Enter the coefficient for b: " << endl;
19     cin >> b;
20     cout << "Enter the coefficient for c: " << endl;
21     cin >> c;
22
23     // Calculate the discriminant using the pow function.
24     d = (( pow (b, 2) ) - ( 4*a*c ));
25
26     // Calculate the roots using the pow function.
27     d1 = (-b + ( pow ( d, (1/2) )));
28     d2 = (+b + ( pow ( d, (1/2) )));
29
30     if (d > 0 || d == 0) {
31         result1 = d1 / ( 2*a );
32         result2 = d2 / ( 2*a );
33         cout << "The roots of x are: " << result1 << " , " << result2 << endl;
34     } else {
35         cout << "The roots are complex and or imaginary and are not supported by this
calculator." << endl;
36     }
37
38     // Testing outputs
39
40     // cout << "Testing outputs: " << endl;
41     // cout << "The output of d is: " << d << endl;
42     // cout << "The output of d1 is: " << d1 << endl;
43     // cout << "The output of d2 is: " << d2 << endl;
44
45     return 0;
46 }
```