

```

1 // if_quadratic_equation.cpp
2 //
3 #ifdef _WIN32
4     #include <tchar.h>
5     #include <conio.h>
6 #elif (defined __linux__) || (defined _AIX) || (defined __APPLE__)
7     typedef char _TCHAR;
8     #define _tmain main
9 #endif
10
11 #include <stdio.h>
12 #include <math.h>
13 #include <iostream>
14 using namespace std;
15
16 void my_getch();
17
18 int _tmain(int argc, _TCHAR* argv[])
19 {
20     float a, b, c, d, xr1, xr2, xi;
21
22     cout << "\nZadajte koeficienty a,b,c kvadratickej rovnice"
23          << " a*x^2 + b*x + c = 0." << endl;
24     cout << "a = ";
25     cin >> a;
26     cout << "b = ";
27     cin >> b;
28     cout << "c = ";
29     cin >> c;
30
31     cout << endl << "Riesenia rovnice su:" << endl;
32     if (a == 0) {
33         if (b == 0) {
34             if (c == 0)
35                 cout << " nekonecne vela rieseni";
36             else
37                 cout << " ziadne riesenie";
38         }
39         else
40             cout << " x = " << -c / b;
41     }
42     else {
43         d = b * b - 4 * a * c;
44         if (d >= 0) {
45             xr1 = (-b + sqrt(d)) / (2 * a);
46             xr2 = (-b - sqrt(d)) / (2 * a);
47             xi = 0;
48         }
49         else {
50             xr1 = -b / (2 * a);
51             xr2 = xr1;
52             xi = fabs(sqrt(-d) / (2 * a));
53         }
54         cout << " x1 = " << xr1 << "+i*" << xi << endl;
55         cout << " x2 = " << xr2 << "-i*" << xi << endl;
56     }
57
58     my_getch();
59     return 0;
60 }
61
62 void my_getch()
63 {
64     #ifdef _WIN32
65         _getch();
66     #else
67         cout << endl;
68     #endif
69 }

```