

c++ &gt; test1.c &gt; main()

```
1  #include <stdio.h>
3
4  int main() {
5      double a, b, c, discriminant, root1, root2, realPart, imagPart;
6      printf("Enter coefficients a, b and c: ");
7      scanf("%lf %lf %lf", &a, &b, &c);
8
9      if (a == 0) {
10         printf("This is not a quadratic equation (a cannot be zero).\n");
11         return 0;
12     }
13     discriminant = b*b - 4*a*c;
14     if (discriminant > 0) {
15         root1 = (-b + sqrt(discriminant)) / (2*a);
16         root2 = (-b - sqrt(discriminant)) / (2*a);
17         printf("Roots are real and distinct.\n");
18         printf("Root1 = %.2lf and Root2 = %.2lf\n", root1, root2);
19     }
20     else if (discriminant == 0) {
21         root1 = -b / (2*a);
22         printf("Roots are real and equal.\n");
23         printf("Root1 = Root2 = %.2lf\n", root1);
24     }
25     else {
26         realPart = -b / (2*a);
27         imagPart = sqrt(-discriminant) / (2*a);
28         printf("Roots are complex and conjugate.\n");
29         printf("Root1 = %.2lf + %.2lfi and Root2 = %.2lf - %.2lfi\n",
30             realPart, imagPart, realPart, imagPart);
31     }
32     return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc test1.c -o test1 && "/Users/rishabhtrivedi/Documents/vs/c++/"test1
rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc test1.c -o test1 && "/Users/rishabhtrivedi/Documents/vs/c++/"test1
Enter coefficients a, b and c: 2 4 6
Roots are complex and conjugate.
Root1 = -1.00 + 1.41i and Root2 = -1.00 - 1.41i
rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```