```
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main.c
 1 //DAY 9
 2 //Q17
 3 #include <stdio.h>
 4 #include <math.h>
 5 - int main() {
        float a, b, c, discriminant, root1, root2, realPart, imagPart;
        printf("Enter coefficients a, b and c: ");
 8
        scanf("%f %f %f", &a, &b, &c);
 9
10
        discriminant = b*b - 4*a*c;
11
12
        if (a == 0) {
13 *
            printf("This is not a quadratic equation (a cannot be 0).\n");
14
15
        }
        else {
16 -
            if (discriminant > 0) {
17 -
                root1 = (-b + sqrt(discriminant)) / (2*a);
18
                root2 = (-b - sqrt(discriminant)) / (2*a);
19
                printf("Roots are real and distinct.\n");
20
                printf("Root 1 = %.2f\nRoot 2 = %.2f\n", root1, root2);
21
22
            else if (discriminant == 0) {
23 -
                root1 = -b / (2*a);
24
                printf("Roots are real and equal.\n");
25
                printf("Root = %.2f\n", root1);
26
27
            }
            else {
28 -
                realPart = -b / (2*a);
29
                imagPart = sqrt(-discriminant) / (2*a);
30
                printf("Roots are complex and imaginary.\n");
31
                printf("Root 1 = %.2f + %.2fi\n", realPart, imagPart);
32
                printf("Root 2 = %.2f - %.2fi\n", realPart, imagPart);
33
            }
34
35
        }
36
            return 0:
37 }
```

Output

```
Enter coefficients a, b and c: 3 5 4
Roots are complex and imaginary.
Root 1 = -0.83 + 0.80i
Root 2 = -0.83 - 0.80i
=== Code Execution Successful ===
```

