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1: // C - Program for calculation of roots of a quadratic equation.
2:
3: #include<stdio.h>
4: #include<math.h>
5: main()
6: {
7:     //Variables
8:     float a,b,c,d,r1,r2,e,f;
9:
10:    //Inputs
11:    printf("Enter the values of a,b,c (Separated by space) : ");
12:    scanf("%f %f %f",&a,&b,&c);
13:
14:    //Calculation of discriminant.
15:    d=pow(b,2)-(4*a*c);
16:
17:    //Calculation of roots based on nature of discriminant.
18:    // if d > 0 => Roots will be real & Unequal.
19:    // if d = 0 => Roots will be real & equal.
20:    // if d < 0 => Roots will not be real.
21:
22:    if(d>=0)
23:    {
24:        r1=(-b+sqrt(d))/(2*a);
25:        r2=(-b-sqrt(d))/(2*a);
26:        printf("First Root= %f\nSecond Root= %f",r1,r2);
27:    }
28:    else
29:    {
30:        e=-b/(2*a);
31:        f=sqrt(-d)/(2*a);
32:        printf("First Root= %f+i%f\nSecond Root= %f+i%f",e,f,e,f);
33:    }
34: }

```