

```
3. import java.util.*;
class Quadratic
{
    public static void main (String[] arg)
    {
        Scanner s = new Scanner (System.in);
        System.out.println("Enter a, b, c of the equation  $ax^2 + bx + c = 0$ : ");
        double a = s.nextDouble();
        double b = s.nextDouble();
        double c = s.nextDouble();
        double d = b*b - 4.0*a*c;
        double roots1, roots2;
        System.out.println(d);
        if (d > 0)
        {
            System.out.println("roots are real and unequal");
            roots1 = (-b - Math.sqrt(d)) / (2.0*a);
            roots2 = (-b + Math.sqrt(d)) / (2.0*a);
            System.out.println("root1: " + roots1 + " root2: " + roots2);
        }
        else if (d == 0)
        {
            System.out.println("Roots are real and equal");
            roots1 = (-1*b) / (2*a);
            roots2 = roots1;
            System.out.println("root1: " + roots1 + " root2: " + roots2);
        }
        else
        {
            System.out.println("roots are imaginary");
        }
    }
}
```