

```
import java.util.Scanner;
class Quadratic
{
    int a, b, c;
    double r1,r2,d;
    void getd()
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the coefficients of a,b,c");
        a=s.nextInt();
        b=s.nextInt();
        c=s.nextInt();
    }
    void compute()
    {
        while(a==0)
        {
            System.out.println("Not a quadratic equation");
            System.out.println("Enter a non zero value for a:");
            Scanner s=new Scanner(System.in);
            a=s.nextInt();
        }
        d=b*b-4*a*c;
        if(d==0)
        {
            r1=(-b)/(2*a);
            System.out.println("Roots are real and equal");
            System.out.println("Root1=Root2="+r1);
        }
    }
}
```

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else if(d>0)
{
    r1=((-b)+(Math.sqrt(d)))/(double)(2*a);
    r2=((-b)-(Math.sqrt(d)))/(double)(2*a);
    System.out.println("Roots are real and distinct");
    System.out.println("Root1="+r1+"Root2=" +r2);
}

else if(d<0)
{
    System.out.println("Roots are imaginary");
    r1=(-b)/(2*a);
    r2=Math.sqrt(-d)/(2*a);
    System.out.println("Root1="+r1+"+i"+r2);
    System.out.println("Root1="+r1+"-i"+r2);
}
}
}
}
class QuadraticMain
{
    public static void main(String args[])
    {
        Quadratic q=new Quadratic();
        q.getd();
        q.compute();
    }
}

```