

```
import java.util.*;
import java.lang.*;

public class Quad
{
    public static void main(String args [])
    {
        System.out.println("Enter a,b,c of the quadratic equation:");
        Scanner scan= new Scanner (System.in);
        double a= scan.nextDouble();
        double b= scan.nextDouble();
        double c= scan.nextDouble();
        double d= (b*b)-(4*a*c);
        System.out.println("D = "+d);
        if (d==0)
        {
            double r1=-b/(2*a);
            System.out.println("the roots are real and distinct.");
            System.out.println(r1);
        }
        else if(d>0)
        {
            double r1=(-b+Math.sqrt (d))/(2*a);
            double r2=(-b-Math.sqrt (d))/(2*a);
            System.out.println("The roots are real and distinct.");
            System.out.println(r1+" and "+r2);
        }
        else
        {
            System.out.println("There are no real roots.");
        }
    }
}
```

CA Command Prompt

Microsoft Windows [Version 10.0.19041.508]
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C:\Users\Jelani>cd java

C:\Users\Jelani\java>javac Quad.java

C:\Users\Jelani\java>java Quad

Enter a,b,c of the quadratic equation:

1

2

3

D = -8.0

There are no real roots.

C:\Users\Jelani\java>java Quad

Enter a,b,c of the quadratic equation:

-1

2

3

D = 16.0

The roots are real and distinct.

-1.0 and 3.0