

```
import java.util.Scanner;
import java.lang.*;
public class Quadratic {
public static void main(String [] args){
double a,b,c,d,R1,R2;
Scanner sc = new Scanner(System.in);
System.out.println("enter the values of a,b,c :");
a = sc.nextDouble();
b = sc.nextDouble();
c = sc.nextDouble();
sc.close();
d = (Math.pow(b,2) - (4*a*c));
if(d<0)
{
System.out.println("No real roots");
}
else if( d == 0)
{
System.out.println("Roots are real and equal");
R1 = (-b)/(2*a);
R2 = (-b)/(2*a);
System.out.println(" First root =" + R1 + "\nSecond root =" + R2);
}
else if (d>0)
{
System.out.println("Roots are real and distinct");
R1 = ( -b + Math.sqrt(d))/(2*a);
R2 = ( -b - Math.sqrt(d))/(2*a);
System.out.println("First root=" + R1 + "\nSecond root =" + R2);
}
}
}
```

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C:\Users\Appy>cd desktop

C:\Users\Appy\Desktop>cd java lab

C:\Users\Appy\Desktop\java lab>javac Quadratic.java

C:\Users\Appy\Desktop\java lab>java Quadratic

enter the values of a,b,c :

1 2 1

Roots are real and equal

First root =-1.0

Second root =-1.0

C:\Users\Appy\Desktop\java lab>java Quadratic

enter the values of a,b,c :

1 1 1

No real roots

C:\Users\Appy\Desktop\java lab>java Quadratic

enter the values of a,b,c :

4 4 1

Roots are real and equal

First root =-0.5

Second root =-0.5

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