

```

import java.util.Scanner;

class quadratic {

    public static void main(String[] args) {

        double a,b,c,disc;

        double r1, r2;

        Scanner inp= new Scanner(System.in);

        System.out.println("Enter values for a,b,c:\n");

        a=inp.nextDouble();

        b=inp.nextDouble();

        c=inp.nextDouble();

        disc=((b*b)-(4*a*c));

        if(disc>0){

            System.out.println("roots are real");

            r1 = (-b+ Math.sqrt(disc))/(2*a);

            r2 = (-b- Math.sqrt(disc))/(2*a);

            System.out.format("r1=" +r1+ "r2="+r2);

        }

        else if(disc == 0) {

            System.out.println("roots are real and equal");

            r1=r2 =-b/(2*a);

        }

        else {

            System.out.format("no real roots exist");

        }

    }

}

```

```
c:\workspace>javac quadratic.java

c:\workspace>java quadratic
Enter values for a,b,c:

1 -4 -10
roots are real
r1=5.741657386773941r2=-1.7416573867739413
}c:\workspace>
```

```
c:\workspace>javac quadratic.java

c:\workspace>java quadratic
Enter values for a,b,c:

1 -3 -10
roots are real
r1=5.0r2=-2.0
c:\workspace>javac quadratic.java

c:\workspace>java quadratic
Enter values for a,b,c:

1 2 3
no real roots exist
```