

LAB1\_QuadraticEquation

import java.util.Scanner;

class quadratic\_equation

{

public static void main(String[]args)

{

double a, b, c, sum, root1, root2;

Scanner in = new Scanner(System.in);

System.out.println("Enter the constants a,b, and c for the quadratic equation  $ax^2 + bx$   
+ c");

a=in.nextDouble();

b=in.nextDouble();

c=in.nextDouble();

sum= (b\*b)-(4\*a\*c);

if(sum>0)

{

System.out.println("Roots are real and unequal" + sum);

root1=(-b + Math.sqrt(sum))/(2\*a);

root2=(-b - Math.sqrt(sum))/(2\*a);

System.out.println("Roots are" + root1 + "and" + root2 );

}

else if(sum==0)

```

        {

            System.out.println("Roots are real and equal." + sum);

            root1 = root2 = (-b)/(2*a);

            System.out.println("Roots of the quadratic equation are "+ root1 +" and "+
root2);

        }

        else if(sum<0)

        {

            System.out.println("Roots are unreal" + sum);

        }

    }

```

```

Enter the constants a,b, and c for the quadratic equation ax^2 + bx + c
1
-2
1
Roots are real and equal.0.0
Roots of the quadratic equation are 1.0 and 1.0

-----
(program exited with code: 0)

Press any key to continue . . . █
}

```