

lab - 1

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

```
public class main {
```

```
    public static void main (String [] args)
```

```
    {  
        Scanner sc = new Scanner (System.in);
```

```
        int a, b, c;
```

```
        double D, r1, r2;
```

```
        System.out.println ("Enter the values of a, b and c");
```

```
        a = sc.nextInt();
```

```
        b = sc.nextInt();
```

```
        c = sc.nextInt();
```

```
        D = (b*b) - (4*a*c);
```

```
        if (D == 0)
```

```
        {
```

```
            System.out.println ("\n Roots are equal and real");
```

```
            
$$r_1 = r_2 = \frac{-b \pm \sqrt{D}}{2a};$$

```

```
            System.out.println ("\n" + r1 + " " + r2);
```

```
        }
```

```
    else if (D > 0)
```

```
    {
```

```
        System.out.println ("\n Roots are real and distinct");
```

```
        
$$r_1 = \frac{-b + \text{Math.sqrt}(D)}{2a};$$

```

```
        
$$r_2 = \frac{-b - \text{Math.sqrt}(D)}{2a};$$

```

```
        System.out.println (r1 + " " + r2);
```

```
    }
```

use
{

system.out.println("/n Roots does not exist"),
{

}