

## Quadratic Equation

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

```
class quadratic
```

```
{
```

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

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

```
        System.out.println ("quadratic equation of form  $ax^2 + bx + c$ ");
```

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

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

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

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

```
        while (a != 0)
```

```
        { float d = (b*b) - (4*a*c);
```

```
            if (d == 0)
```

```
            { float x = (-1*b) / (2*a);
```

```
                System.out.println ("the roots are " + x);
```

```
                break;
```

```
            }
```

```
        else if (d > 0)
```

```
        { float xa =  $\frac{-1*b + \text{math.sqrt}(d)}{2*a}$ ;
```

```
            float xb =  $\frac{-1*b - \text{math.sqrt}(d)}{2*a}$ ;
```

```
            System.out.println ("The roots are " + xa + " & " + xb);
```

```
            break;
```

```
        }
```

```
        else if (d < 0)
```

```
        { system.out.println ("imaginary");
```

```
            break;
```

```
        }
```

```
    }
```