

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

```
public class Main {
```

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

```
        double root1, root2;
```

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

```
        System.out.println("Enter value for a:");
```

```
        double a = in.nextFloat();
```

```
        System.out.println("Enter value for b:");
```

```
        double b = in.nextFloat();
```

```
        System.out.println("Enter value for c:");
```

```
        double c = in.nextFloat();
```

```
        double determinant = b*b - 4*a*c;
```

```
        if (determinant > 0) {
```

```
            root1 = (-b + Math.sqrt(determinant)) / (2*a);
```

```
            root2 = (-b - Math.sqrt(determinant)) / (2*a);
```

```
            System.out.format("root1 = %.2f and root2 = %.2f", root1, root2);
```

```
        }
```

```
        else if (determinant == 0) {
```

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

```
            System.out.format("root1 = root2 root2 = %.2f", root1);
```

```
        }
```

```
        else {
```

```
            double realPart = -b / (2*a);
```

```
            double imaginaryPart = Math.sqrt(-determinant) / (2*a);
```

```
            System.out.format("root1 = %.2f + %.2fi and root2 = %.2f - %.2fi",
```

```
                realPart, imaginaryPart, realPart, imaginaryPart);
```

```
            System.out.println("This quadratic equation has no real roots");
```