

12/12/23

## Quadratic Equation

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```
import java.util.Scanner;
class Quadratic
{
    int a, b, c;
    double x1, x2, d;
    void getd()
    {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the coefficients of a, b, c");
        a = s.nextInt();
        b = s.nextInt();
        c = s.nextInt();
    }
    void compute()
    {
        while (a == 0)
        {
            System.out.println("Not a quadratic equation");
            System.out.println("Enter a non zero value for a");
            Scanner s = new Scanner(System.in);
            a = s.nextInt();
        }
        d = b*b - 4*a*c;
        if (d == 0)
        {
            x1 = (-b) / (2*a);
            System.out.println("Roots are equal and equal");
            System.out.println("Root 1 = Root 2 = " + x1);
        }
        else if (d > 0)
        {
            x1 = (-b + Math.sqrt(d)) / (2*a);
            x2 = (-b - Math.sqrt(d)) / (2*a);
            System.out.println("Root 1 = " + x1 + " and Root 2 = " + x2);
        }
        else if (d < 0)
        {
            System.out.println("Roots are complex");
        }
    }
}
```