

1.Quadratic solutions

```
import java.util.Scanner;

public class quadratic_1{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int a,b,c;
        double d;
        System.out.println("Enter a:");
        a = sc.nextInt();
        System.out.println("Enter b:");
        b = sc.nextInt();
        System.out.println("Enter c:");
        c = sc.nextInt();
        d = ((b*b)-(4*a*c));
        float x,x1,x2;
        if(d==0){
            x = b/(2*a);
            System.out.println("Roots are equal:"+x);
        }
        else if(d>0){
            x1 = (float)(b+(Math.sqrt(d)))/(2*a);
            x2 = (float)(b-(Math.sqrt(d)))/(2*a);
        }
    }
}
```

```
System.out.println("Roots real and different");

System.out.println("Root1:"+x1);

System.out.println("Root2:"+x2);

}

else{

System.out.println("Roots are imaginary");

}

}

}
```

```
java_lab_2023/oo/bin/quadratic_1
Enter a:2
Enter b:6
Enter c:1
Roots real and different
Root1:2.8228757
Root2:0.17712435
```