

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);

    }

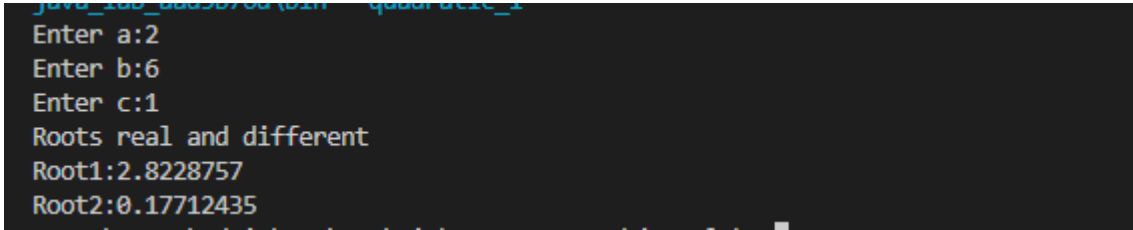
    else{

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

    }

}

}
```

A screenshot of a terminal window with a dark background. The prompt 'java_100_00030700@bin ~\$' is followed by the command 'quadratic_1'. The program then prompts for 'a:2', 'b:6', and 'c:1'. It outputs 'Roots real and different', 'Root1:2.8228757', and 'Root2:0.17712435'.

```
java_100_00030700@bin ~$ java quadratic_1
Enter a:2
Enter b:6
Enter c:1
Roots real and different
Root1:2.8228757
Root2:0.17712435
```