WEEK 1

```
import java.util.scanner;
import java.lang.math;
class RealSolution{
    private int a,b,c;
    void accept(){
        System.out.println("A Quadratic eqn. is of the form
                            ax^2 + bx + c = 0");
        System.out.println("Enter the values of a, b, c to find
                            out the roots of the equation");
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the value of a:");
        this.a = sc.nextInt();
        System.out.print("Enter value of b:");
        this.b = sc.nextInt();
        System.out.print("Enter value of c:");
        this.c = sc.nextInt();
    }
    double calculateD(){
        double D = (b*b) - 4*(a*c);
        if (D < 0)
            return -999;
        else
            return D;
    }
    void DisplayResult (double D){
        double r1, r2;
        if (D == -999)
            System.out.print("Roots are complex");
        else
        { r1 = (-b + Math.sqrt(D)) /2a;
          r2 = (-b - Math.sqrt(D)) /2a;
        } System.out.println("Roots are:" + "r1" + "," + "r2");
    }
public static void main(String args[]){
    RealSolution rs = new RealSolution();
    rs.accept();
    double Discriminate = rs.calculateD();
    rs.displayResult(Discriminate);
}
}
```

Expected o/p :-

A quadratic equation is of the form $ax^2 + bx + c = 0$

Enter values of a, b, c in order to find Roots of eqn.

Enter value of a: 1

Enter value of b: 0

Enter value of c: -1

Roots are : -1.0, 1.0