Week-3

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Q- Develop a Java program that prints all real solutions to the quadratic eq^n → $ax^2 + bx + c = 0$. Read in a, b, c and use the quadratic formula. If the discriminate is negative, display a message that there are no real roots.

Sol 2

```
import java.util.*;
class Series {
    public static void main (String args[]){
        double a, b, c, d, r1, r2;
        Scanner in = new Scanner (System.in);
        System.out.println("Enter the three
            coefficients : \n");
        a = in.nextDouble ();
        b = in.nextDouble ();
        c = in.nextDouble ();
        System.out.println("a:"+a+"b:"+b+"c:"+c);
        d = b*b - 4*a*c;
        if (d >= 0){
            System.out.println("Roots are real & distinct");
            r1 = (-b + Math.sqrt(d))/(2*a);
            r2 = (-b - Math.sqrt(d))/(2*a);
            System.out.println("r1:"+r1+"r2:"+r2);
    }
```

```
else if (d == 0) {
    System.out.println("Roots are real & equal");
    r1 = (-b) / (2 * a);
    System.out.println("r = " + r1);
}
else if (d < 0) {
    System.out.println("Roots are imaginary");
}
}
}
```