Java

Q) Develop a program that prints all real solutions to the quadratic equation $ax^2+bx+c=0$.
Read in a, b, c and use quadratic formula. If the discriminate b^2-4ac is negative, display a message that there are no real solutions.

```java
import java.util.Scanner;
    public class main
    {
        public static void main (String args[])
        {
            double d;
            double r1=0, r2=0;
            Scanner sc= new scanner (System.in);
            System.out.println ("Enter coefficients of a,b,c
            of your quadratic equation ax^2+ bx+ c=0");

            double a= sc.newDouble();
            double b= sc.newDouble();
            double c= sc.newDouble();

            d= (b*b) - (4*a*c);

            if (d>0)
            {
                System.out.println ("Roots are real");
```

①

```java
        r1 = (-b + Math.sqrt(d)) / (2*a);
        r2 = (-b + math.sqrt(d)) / (2*a);
        System.out.println("Root 1: " + r1 + " Root 2:" + r2);
    }

    else if (d==0)
    {
        System.out.println("Roots are real and equal");
        r1 = r2 = -b/(2*a);
    }

    else
    {
        System.out.println("Roots are imaginary and no
                            real solution exist");
    }
}
}
```