LAB-1

Write a program to calculate roots of a quadratic equation (ax^2+bx+c)

```
import java.util.*;
import java.lang.Math;
class Solutions
{
    public static void main(String args[])
    {
        Scanner input = new Scanner(System.in);
        float a,b,c;
        System.out.println("Enter the three coefficients of your quadratic equation");
        a = input.nextFloat();
        b = input.nextFloat();
        c = input.nextFloat();
        float d, sol1, sol2;
        d = b*b - 4*a*c;
        if (d<0)
        System.out.println("No Real Solutions");
        else
        sol1 = (float) (-b + Math.sqrt(d)) / (2*a);
        sol2 = (float) (-b - Math.sqrt(d)) / (2*a);
        System.out.println("Solution1: " + sol1);
        System.out.println("Solution2:" + sol2);
    }
}
```

ALGORITHM:

Step 1: INPUT a, b, c

Step 2: d = b * b - 4 * a * c

Step 3: If (d < 0)
PRINT NO real solutions.

ELSE
PRINT Solution1 = (-b + sqrt(d))/2*a
PRINT Solution2 = (-b - sqrt(d))/2*a

Step 4: STOP