import java.util.Scanner;  
public class QuadraticEquationSolver {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        System.out.print("Enter coefficient a: ");  
        double a = scanner.nextDouble();  
        if (a == 0) {  
            System.out.println("Not a quadratic equation");  
            System.out.print("Enter a non-zero value for a: ");  
            a = scanner.nextDouble();  
        }  
        System.out.print("Enter coefficient b: ");  
        double b = scanner.nextDouble();  
        System.out.print("Enter coefficient c: ");  
        double c = scanner.nextDouble();  
        double d = b \* b - 4 \* a \* c;  
        if (d == 0) {  
            double root = -b / (2 \* a);  
            System.out.println("Roots are real and equal");  
            System.out.println("Root 1 and Root 2: " + root);  
        } else if (d > 0) {  
            double r1 = (-b + Math.sqrt(d)) / (2 \* a);  
            double r2 = (-b - Math.sqrt(d)) / (2 \* a);  
            System.out.println("Roots are real and distinct");  
            System.out.println("Root 1: " + r1);  
            System.out.println("Root 2: " + r2);  
        } else {  
            double realPart = -b / (2 \* a);  
            double imaginaryPart = Math.sqrt(-d) / (2 \* a);  
            System.out.println("Roots are imaginary");  
            System.out.println("Root 1: " + realPart + " + " + imaginaryPart + "i");  
            System.out.println("Root 2: " + realPart + " - " + imaginaryPart + "i");  
        }  
    }  
}