/\*Develop a Java program that prints all real solutions to the quadratic equation ax2+bx+c = 0. Read in a, b, c and use the quadratic formula. If the discriminate b2-4ac is negative, display a message stating that there are no real solutions.\*/

import java.lang.Math;

import java.util.Scanner;

class Quadratic{

int a, b, c;

double r1, r2;

Quadratic(){

System.out.println("Enter a, b and c from quadratic equation: ");

Scanner sc = new Scanner(System.in);

a = sc.nextInt();

b = sc.nextInt();

c = sc.nextInt();

}

double discriminant(){

return b\*b-4\*a\*c;

}

void compute(){

if(discriminant() > 0){

r1 = (-b + Math.sqrt(discriminant()))/(double)(2\*a);

r2 = (-b - Math.sqrt(discriminant()))/(double)(2\*a);

System.out.println("The roots are unique");

System.out.println("First root: "+ r1);

System.out.println("Second root: "+ r2);

}

else if(discriminant() == 0){

r1 = -b/(2\*a);

System.out.println("The roots are equal");

System.out.println("The root is: "+ r1);

}

else if(discriminant() < 0){

r1 = -b/(2\*a);

r2 = (-b + Math.sqrt(-discriminant()))/(double)(2\*a);

System.out.println("The roots are Imaginary");

System.out.println("First root: "+ r1 + "+i" + r2);

System.out.println("Second root: "+ r1 + "-i" + r2);

}

}

}

class Run{

public static void main(String[] args){

Quadratic eq1 = new Quadratic();

eq1.compute();

Quadratic eq2 = new Quadratic();

eq2.compute();

Quadratic eq3 = new Quadratic();

eq3.compute();

}

}

