

13 Quadratic equation solver

5 points

Introduction

Jeremy is nervous. He has his first Quadratic Equation exam, and he is about to begin. But Jeremy is the best young programmer of its classroom, and he wonders if he could programmatically solve any Quadratic Equation in the world with a simple code.

Jeremy knows very well that a generic Quadratic Equation has the form

$$ax^2 + bx + c = 0$$

Where a , b , and c are the coefficients of the equation. Could you help Jeremy and write a program that receives as input the coefficients of the equations and tells you the solution?

Remember that the roots of a Quadratic Equation can be computed as

$$x_{+,-} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Input

The input of the program is the value of the coefficients of the equation, separated by spacing characters.

Output

The output of the program is the solution (the roots of the quadratic equation).

Remember that a quadratic equation can have complex roots when $b^2 - 4ac$ is lesser than 0. Your program must answer "It has complex Roots!" if that is the case (Example 1).

When the roots are not complex, the solution must be shown featuring first x_+ and second x_- with two decimals rounding (Example 2).

Example 1

Input

1 1 5

Output

It has complex Roots!

Example 2

Input

1 2.5 -4.5

Output

$x_+ = 1.21$; $x_- = -3.71$