

# Gobal example, from the ExSol package

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## 1 Introduction

In this text we explain how to solve second-order polynomial equations.

## 2 Solving second-order polynomial equations

The roots of the following equation

$$ax^2 + bx + c = 0 \quad (1)$$

can be determined as:

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (2)$$

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### Exercises

**Exercise 2-1:** Solve the following equation for  $x \in C$ , with  $C$  the set of complex numbers:

$$5x^2 - 3x = 5 \quad (3)$$

**Exercise 2-2:** Consider a 2-dimensional vector space equipped with a Euclidean distance function. Given a right-angled triangle, with the sides  $A$  and  $B$  adjacent to the right angle having lengths, 3 and 4, calculate the length of the hypotenuse, labeled  $C$ .

And now, we can come to conclusion.

## 3 Conclusion

Solving second-order polynomial equations is very easy.