

TE Algèbre & vecteurs II (le retour)

24/09/2025

Factorisation

$$ax^2 + bx + c = a(x - x_1)(x - x_2)$$

$$\text{avec } x_1 = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

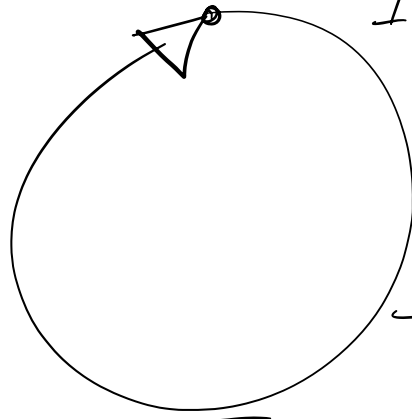
$$x_2 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$$

$$x^2 + (m+n)x + mn = x^2 + mx + nx + mn = (x+m)(x+n)$$

$$x^2 + 7x + 12 = (x+3)(x+4)$$

V. HORNER

IV. GROUPEMENTS



I. MISE EN ÉVIDENCE

$$AB+AC+AD+\dots = A(B+C+D+\dots)$$

II. FORMULES

III. TRINÔME

$$2x^2+6x+C$$

$$2a(a-b) - (a-b)^2 = 2a^2 - \cancel{2ab} - a^2 + \cancel{2ab} - b^2 \\ = a^2 - b^2 = (a+b)(a-b) \checkmark$$

$$2a(\cancel{a-b}) - (a-b)(\cancel{a-b}) =$$

$$(2a - (a-b))(a-b) = (a+b)(a-b) \checkmark$$

$$\underbrace{(2a+3b)}_A \cdot \underbrace{(2x+y)}_B + \underbrace{(3a+5b)}_C \cdot \underbrace{(2x+y)}_B =$$

$$AB + CB = (A+C)B$$

$$(2a+3b + 3a+5b)(2x+y) = (5a+8b)(2x+y)$$

$$(x-3)(x+1) + 2(x-3)^2 - (x-3)$$

$$(\cancel{x-3}) \cdot (x+1) + (\cancel{x-3}) \cdot 2(x-3) - (\cancel{x-3}) \cdot 1$$

$$(x-3) \left((x+1) + 2(x-3) - 1 \right) = (x-3)(3x-6) \\ = (x-3) \cdot 3(x-2) = 3(x-3)(x-2)$$