

**Exercice n°1 :**

$$A = 5x(7 + 3x) = 35x + 15x^2 = 15x^2 + 35x$$

$$B = (2x - 4)(x + 3) = 2x^2 + 6x - 4x - 12 = 2x^2 + 2x - 12$$

$$C = (6x - 2)(3 - 2x) = 18x - 12x^2 - 6 + 4x = -12x^2 + 22x - 6$$

Exercice n°2 :

$$I = (3x + 2)(x + 1) + (3x + 2)(4x - 7)$$

$$J = (3x + 2)[(x + 1) + (4x - 7)]$$

$$J = (3x + 2)[x + 1 + 4x - 7]$$

$$J = (3x + 2)(5x - 6)$$

$$J = (4x + 1)(2x - 5) - (2x + 1)(x - 3)$$

$$J = (4x + 1)[(2x - 5) - (x - 3)]$$

$$J = (4x + 1)[2x - 5 - x + 3]$$

$$J = (4x + 1)(x - 2)$$

$$K = (5x + 2)^2 + (5x + 2)(x - 3)$$

$$K = (5x + 2)(5x + 2) + (5x + 2)(x - 3)$$

$$K = (5x + 2)[(5x + 2) + (x - 3)]$$

$$K = (5x + 2)[5x + 2 + x - 3]$$

$$K = (5x + 2)(6x - 1)$$

$$L = (x - 3)(2x - 5) - (x - 3)$$

$$L = (x - 3)[(2x - 5) - 1]$$

$$L = (x - 3)[2x - 5 - 1]$$

$$L = (x - 3)(2x - 6)$$

Exercice n°3 :

$$3x + 1 = 9 = x$$

$$3x - x = 9 - 1$$

$$2x = 8$$

$$x = 4$$

L'équation admet une seule solution 4

$$(3x - 4) - (2x - 8) = 0$$

$$3x - 4 - 2x + 8 = 0$$

$$x + 4 = 0$$

$$x = -4$$

$$x = -4$$

L'équation admet une seule solution -4

$$\text{Si } (3x + 6)(5x - 1) = 0$$

$$\text{Alors } 3x + 6 = 0 \quad \text{ou} \quad 5x - 1 = 0$$

$$3x = -6$$

$$5x = 1$$

$$x = -2$$

$$x = \frac{1}{5}$$

L'équation admet deux solutions $\frac{1}{5}$ et -2

$$\text{Si } 5x(1 - 2x) = 0$$

$$\text{Alors } 5x = 0 \quad \text{ou} \quad 1 - 2x = 0$$

$$x = 0$$

$$-2x = -1$$

$$x = \frac{1}{2}$$

$$x = 0,5$$

L'équation admet deux solutions 0 et 0,5