

Interrogation écrite n° 1

Sujet A

Exercice 1

$$A = 7x^2 + 8 + 3x + 15x^2 + x + 4$$

$$A = 7x^2 + 15x^2 + 3x + x + 8 + 4$$

$$A = 22x^2 + 4x + 12$$

$$B = -3x + 6x^2 + 5x + 1 - 8x^2 + 11$$

$$B = 6x^2 - 8x^2 - 3x + 5x + 1 + 11$$

$$B = -2x^2 + 2x + 12$$

Exercice 2

$$C = (2x + 3)(x - 7) \text{ pour } x = 5$$

$$C = (2 \times 5 + 3) \times (5 - 7)$$

$$C = (10 + 3) \times (-2)$$

$$C = 13 \times (-2)$$

$$C = -26$$

$$D = x^2 + 8x + 15 \text{ pour } x = -2$$

$$D = (-2)^2 + 8 \times (-2) + 15$$

$$D = 4 - 16 + 15$$

$$D = -12 + 15$$

$$D = 3$$

Exercise 3

$$\begin{aligned} E &= 9(x+2) \\ &= 9 \times x + 9 \times 2 \\ &= 9x + 18 \end{aligned}$$

$$\begin{aligned} F &= 3x(2x-5) \\ &= 3x \times 2x - 3x \times 5 \\ &= 6x^2 - 15x \end{aligned}$$

$$\begin{aligned} G &= -6(x-4) \\ &= -6 \times x + 6 \times 4 \\ &= -6x + 24 \end{aligned}$$

$$\begin{aligned} H &= 4x(x+8) - (x^2 - 12x + 30) \\ &= 4x \times x + 4x \times 8 - x^2 + 12x - 30 \\ &= 4x^2 + 32x - x^2 + 12x - 30 \\ &= 3x^2 + 44x - 30 \end{aligned}$$

Sujet B

Exercice 1

$$A = 6x^2 + 7 + 5x + 18x^2 + x + 8$$

$$A = 6x^2 + 18x^2 + 5x + x + 7 + 8$$

$$A = 24x^2 + 6x + 15$$

$$B = -5x + 7x^2 + 9x + 3 - 10x^2 + 8$$

$$= 7x^2 - 10x^2 - 5x + 9x + 3 + 8$$

$$= -3x^2 + 4x + 11$$

Exercice 2

$$C = (3x + 2)(x - 6) \text{ pour } x = 4$$

$$C = (3 \times 4 + 2)(4 - 6)$$

$$C = (12 + 2) \times (-2)$$

$$C = 14 \times (-2)$$

$$C = -28$$

$$D = x^2 + 5x + 8 \text{ pour } x = -3$$

$$D = (-3)^2 + 5 \times (-3) + 8$$

$$D = 9 - 15 + 8$$

$$D = -6 + 8$$

$$D = -2$$

Exercice 3

$$\begin{aligned} E &= 7(x+2) \\ &= 7 \times x + 7 \times 2 \\ &= 7x + 14 \end{aligned}$$

$$\begin{aligned} F &= 2x(5x-3) \\ &= 2x \times 5x - 2x \times 3 \\ &= 10x^2 - 6x \end{aligned}$$

$$\begin{aligned} G &= -4(x-6) \\ &= -4 \times x + 4 \times 6 \\ &= -4x + 24 \end{aligned}$$

$$\begin{aligned} H &= 3x(x+8) - (x^2 - 14x + 20) \\ &= 3x \times x + 3x \times 8 - x^2 + 14x - 20 \\ &= 3x^2 + 24x - x^2 + 14x - 20 \\ &= 2x^2 + 38x - 20 \end{aligned}$$