

Calcul littéral - S1 - ce

Exercice 3

$$\begin{aligned}A &= 4x(-4x-10) \\ &= (4x) \times (-4x) + (4x) \times (-10) \\ &= -16x^2 - 40x\end{aligned}$$

$$\begin{aligned}B &= (-9x+7) \times 10 \\ &= (-9x) \times 10 + 7 \times 10 \\ &= -90x + 70\end{aligned}$$

$$\begin{aligned}C &= 5x(-6x+8) \\ &= 5x \times (-6x) + 5x \times 8 \\ &= -30x^2 + 40x\end{aligned}$$

$$\begin{aligned}D &= -8x(-8x-3) \\ &= (-8x) \times (-8x) + (-8x) \times (-3) \\ &= +64x^2 + 24x\end{aligned}$$

$$\begin{aligned}E &= -3x(-8x+5) \\ &= (-3x) \times (-8x) + (-3x) \times 5 \\ &= +24x^2 - 15x\end{aligned}$$

$$\begin{aligned}F &= 2(-7x-2) \\ &= 2x(-7x) + 2x(-2) \\ &= -14x - 4\end{aligned}$$

$$\begin{aligned}G &= (2x+6) \times 2 \\ &= (2x) \times 2 + 6 \times 2 \\ &= 4x + 12\end{aligned}$$

$$\begin{aligned}H &= -3(-4x-2) \\ &= (-3) \times (-4x) + (-3) \times (-2) \\ &= 12x + 6\end{aligned}$$

Exercice 4

$$\begin{aligned}A &= (-8x-9)(5x+6) \\ &= (-8x) \times (5x) + (-8x) \times 6 + (-9) \times 5x + (-9) \times 6 \\ &= -40x^2 - 48x - 45x - 54 \\ &= -40x^2 - 93x - 54\end{aligned}$$

$$\begin{aligned}B &= (-6x-7)(-5x-7) \\ &= (-6x) \times (-5x) + (-6x) \times (-7) + (-7) \times (-5x) + (-7) \times (-7) \\ &= +30x^2 + 42x + 35x + 49 \\ &= 30x^2 + 77x + 49\end{aligned}$$

$$C = (-9x - 3)(-10x - 4)$$

$$= (-9x) \times (-10x) + (-9x) \times (-4) + (-3) \times (-10x) + (-3) \times (-4)$$

$$= 90x^2 + 36x + 30x + 12$$

$$= 90x^2 + 66x + 12$$

$$D = (-2x - 1)(-7x + 3)$$

$$= (-2x) \times (-7x) + (-2x) \times 3 + (-1) \times (-7x) + (-1) \times 3$$

$$= 14x^2 - 6x + 7x - 3$$

$$= 14x^2 + x - 3$$

$$E = (-3x - 7)(-5x + 5)$$

$$= (-3x) \times (-5x) + (-3x) \times 5 + (-7) \times (-5x) + (-7) \times 5$$

$$= 15x^2 - 15x + 35x - 35$$

$$= 15x^2 + 20x - 35$$

$$F = (2x - 8)(3x - 3)$$

$$= 2x \times 3x + 2x \times (-3) + (-8) \times 3x + (-8) \times (-3)$$

$$= 6x^2 - 3x - 24x + 24$$

$$= 6x^2 - 27x + 24$$

Exercise 5.

$$A = -2n^2 \times (-9) \\ = 18n^2$$

$$B = -9y \times 6y = (-9) \times 6 \times y^2 \\ = -54y^2$$

$$C = -2t \times 5 \\ = (-2) \times 5 \times t \\ = -10t$$

$$D = -7x^2 \times (-2) \\ = (-7) \times (-2) \times x^2 \\ = +14x^2$$

$$E = 7s - 6s \\ = 3s$$

$$F = 3 \times 4s^2 \\ = 12s^2$$

$$G = 9w^2 \times 2 \\ = 18w^2$$

$$H = 7 \times 6q^2 \\ = 42q^2$$

$$I = -6t - 4t \\ = -10t$$

Exercice 6

$$\begin{aligned} A &= -6(6x - 10) \\ &= (-6) \times 6x + (-6) \times (-10) \\ &= -36x + 60 \end{aligned}$$

$$\begin{aligned} B &= (x+7) \times (-8x) \\ &= x \times (-8x) + 7 \times (-8x) \\ &= -8x^2 - 56x \end{aligned}$$

$$\begin{aligned} C &= (-8x+6) \times (-6x) \\ &= (-8x) \times (-6x) + 6 \times (-6x) \\ &= 48x^2 - 36x \end{aligned}$$

$$\begin{aligned} D &= (-10x+5) \times 6x \\ &= (-10x) \times 6x + 5 \times (6x) \\ &= -60x^2 + 30x \end{aligned}$$

$$\begin{aligned} E &= -3(9x+10) \\ &= (-3) \times 9x + (-3) \times 10 \\ &= -27x - 30 \end{aligned}$$

$$\begin{aligned} F &= 9(4x-10) \\ &= 9 \times 4x + 9 \times (-10) \\ &= 36x - 90 \end{aligned}$$

$$\begin{aligned} G &= (-8x-2) \times 10x \\ &= (-8x) \times 10x + (-2) \times 10x \\ &= -80x^2 - 20x \end{aligned}$$

$$\begin{aligned} H &= 9(4x-2) \\ &= 9 \times 4x + 9 \times (-2) \\ &= 36x - 18 \end{aligned}$$