

Calcul algébrique

Correction de l'exercice 1

1.

$$\begin{aligned}A &= 4 \times (x - 1) + (2x + 4)(x - 2) \\&= 4x - 4 + 2x^2 - 4x + 4x - 8 \\&= 2x^2 + 4x - 12\end{aligned}$$

2.

$$\begin{aligned}B &= 2x + 4 - (2x - 4)(5x + 2) \\&= 2x + 4 - (10x^2 + 4x - 20x - 8) \\&= 2x + 4 - 10x^2 - 4x + 20x + 8 \\&= -10x^2 + 18x + 12\end{aligned}$$

3.

$$\begin{aligned}C &= (5x - 1)(x + 2) - (3x - 1) \\&= 5x^2 + 10x - x - 2 - 3x + 1 \\&= 5x^2 + 6x - 1\end{aligned}$$

Correction de l'exercice 2

1.

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

2.

$$\begin{aligned}B &= -5x + 4 + (x - 4)(-5x - 2) \\&= -5x + 4 - 5x^2 - 2x + 20x + 8 \\&= -5x^2 + 13x + 12\end{aligned}$$

3.



$$\begin{aligned}
 C &= (x+1)(-x-2) + 2x - 6 \\
 &= -x^2 - 2x - x - 2 + 2x - 6 \\
 &= -x^2 - x - 8
 \end{aligned}$$

Correction de l'exercice 3

1.



$$\begin{aligned}
 A &= (3x-2)^2 + (x-3)(x-2) \\
 &= 9x^2 - 12x + 4 + x^2 - 2x - 3x + 6 \\
 &= 10x^2 - 17x + 10
 \end{aligned}$$

2.

$$\begin{aligned}
 B &= -x + 4 \times (x-3) + (2x-1)(-3x-2) \\
 &= -x + 4x - 12 - 6x^2 - 4x + 3x + 2 \\
 &= -6x^2 + 2x + 10
 \end{aligned}$$

3.

$$\begin{aligned}
 C &= (3x-1)(x-3) + (2x-6)^2 \\
 &= 3x^2 - 9x - x + 3 + 4x^2 - 24x + 36 \\
 &= 7x^2 - 34x + 39
 \end{aligned}$$

Correction de l'exercice 4

Correction de l'exercice 5

Correction de l'exercice 6

Correction de l'exercice 7

Correction de l'exercice 8

Correction de l'exercice 9

Correction de l'exercice 10