



Chapitre 3 Factorisations

Entraîne-toi aux automatismes pour le BREVET :

college.nathan.fr/monka3-auto-brevet

CORRIGÉS DES EXERCICES D'ENTRAÎNEMENT

Exercice 1

$$\begin{aligned} A &= 9x + 13x \\ &= x(9 + 13) \\ &= 22x \end{aligned}$$

$$\begin{aligned} B &= 4x - 5x \\ &= x(4 - 5) \\ &= -1x \\ &= -x \end{aligned}$$

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

$$\begin{aligned} D &= 21 - 7x \\ &= 3 \times 7 - 7x \\ &= 7(3 - x) \end{aligned}$$

Exercice 2

$$\begin{aligned} A &= 52t - 3t \\ &= t(52 - 3) \\ &= 49t \end{aligned}$$

$$\begin{aligned} B &= 16x - 6 \\ &= 8 \times 2 \times x - 2 \times 3 \\ &= 2(8x - 3) \end{aligned}$$

$$\begin{aligned} C &= x^2 + 33x \\ &= x \times x + 33x \\ &= x(x + 33) \end{aligned}$$

$$\begin{aligned} D &= 15 + 9x \\ &= 3 \times 5 + 3 \times 3 \times x \\ &= 3(5 + 3x) \end{aligned}$$

Exercice 3

$$\begin{aligned} A &= 10x + 10 \times 1 \\ &= 10(x + 1) \end{aligned}$$

$$\begin{aligned} B &= x^2 - 3x \\ &= x \times x - 3x \\ &= x(x - 3) \end{aligned}$$

$$\begin{aligned} C &= 12x^2 + 8x \\ &= 3 \times 4 \times x \times x + 2 \times 4 \times x \\ &= 4x(3x + 2) \end{aligned}$$

$$\begin{aligned} D &= 35x - 20 \\ &= 7 \times 5 \times x - 4 \times 5 \\ &= 5(7x - 4) \end{aligned}$$

Exercice 4

1) On choisit x au départ :

- x
- $3x$
- $3x - 4$
- $3x - 4 + x = 4x - 4$

L'expression littérale correspondante est $4x - 4$

$$\begin{aligned} 2) \quad & 4x - 4 \\ &= 4x - 4 \times 1 \\ &= 4(x - 1) \end{aligned}$$

Exercice 5

$$\begin{aligned} & (3x - 2)(6 + 5x) \\ &= 18x + 15x^2 - 12 - 10x \\ &= 15x^2 + 8x - 12 \end{aligned}$$