

Exercice 20 partie 1/2

$$\begin{aligned}3 \times (x + 1) \\&= 3 \times x + 3 \times 1 \\&= 3x + 3\end{aligned}$$

Vérification :

$$\begin{aligned}3 \times (10 + 1) \\&= 3 \times 11 \\&= 33 \\3 \times 10 + 3 \\&= 30 + 3 \\&= 33\end{aligned}$$

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

Vérification :

$$\begin{aligned}(10 + 7) \times 2 \\&= 17 \times 2 \\&= 34 \\2 \times 10 + 14 \\&= 20 + 14 \\&= 34\end{aligned}$$

$$\begin{aligned}(2 + b) \times 5 \\&= 2 \times 5 + b \times 5 \\&= 10 + 5b \\&= 5b + 10\end{aligned}$$

Vérification :

$$\begin{aligned}(2 + 10) \times 5 \\&= 12 \times 5 \\&= 60 \\5 \times 10 + 10 \\&= 50 + 10 \\&= 60\end{aligned}$$



Exercice 20 partie 2/2

$$\begin{aligned} & 5 \times (y + 4) \\ &= 5 \times y + 5 \times 4 \\ &= 5y + 20 \end{aligned}$$

Vérification :

$$\begin{aligned} & 5 \times (10 + 4) \\ &= 5 \times 14 \\ &= 70 \\ & 5 \times 10 + 20 \\ &= 50 + 20 \\ &= 70 \end{aligned}$$

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

Vérification :

$$\begin{aligned} & 7 \times (2 + 10) \\ &= 7 \times 12 \\ &= 84 \\ & 7 \times 10 + 14 \\ &= 70 + 14 \\ &= 84 \end{aligned}$$



Exercice 21 partie 1/2

$$\begin{aligned}(7 + 2x) \times 4 \\ &= 7 \times 4 + 2x \times 4 \\ &= 28 + 8x \\ &= 8x + 28\end{aligned}$$

Vérification :

$$\begin{aligned}(7 + 2 \times 10) \times 4 \\ &= (7 + 20) \times 4 \\ &= 27 \times 4 \\ &= 108 \\ 8 \times 10 + 28 \\ &= 80 + 28 \\ &= 108\end{aligned}$$

$$\begin{aligned}2 \times (3 + 2y) \\ &= 2 \times 3 + 2 \times 2y \\ &= 6 + 4y \\ &= 4y + 6\end{aligned}$$

Vérification :

$$\begin{aligned}2 \times (3 + 2 \times 10) \\ &= 2 \times (3 + 20) \\ &= 2 \times 23 \\ &= 46 \\ 4 \times 10 + 6 \\ &= 40 + 6 \\ &= 108\end{aligned}$$

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

Vérification :

$$\begin{aligned}(2 \times 10 + 4) \times 3 \\ &= (20 + 4) \times 3 \\ &= 24 \times 3 \\ &= 72 \\ 6 \times 10 + 12 \\ &= 60 + 12 \\ &= 72\end{aligned}$$



Exercice 21 partie 2/2

$$\begin{aligned}(4t + 3) \times 2 \\ &= 4t \times 2 + 3 \times 2 \\ &= 8t + 6\end{aligned}$$

Vérification :

$$\begin{aligned}(4 \times 10 + 3) \times 2 \\ &= (40 + 3) \times 2 \\ &= 43 \times 2 \\ &= 86 \\ 8 \times 10 + 6 \\ &= 80 + 6 \\ &= 86\end{aligned}$$

$$\begin{aligned}a \times (1 + 2a) \\ &= a \times 1 + a \times 2a \\ &= a + 2a^2 \\ &= 2a^2 + a\end{aligned}$$

Vérification :

$$\begin{aligned}10 \times (1 + 2 \times 10) \\ &= 10 \times (1 + 20) \\ &= 10 \times 21 \\ &= 210 \\ 2 \times 10^2 + 10 \\ &= 2 \times 100 + 10 \\ &= 200 + 10 \\ &= 210\end{aligned}$$



Exercice 22 partie 1/2

$$\begin{aligned}2a + (3a + 1) \\&= 2a + 3a + 1 \\&= 5a + 1\end{aligned}$$

Vérification :

$$\begin{aligned}2 \times 10 + (3 \times 10 + 1) \\&= 20 + (30 + 1) \\&= 20 + 31 \\&= 51 \\5 \times 10 + 1 \\&= 50 + 1 \\&= 51\end{aligned}$$

$$\begin{aligned}7a + 3 \times (2a + 1) \\&= 7a + 6a + 3 \\&= 13a + 3\end{aligned}$$

Vérification :

$$\begin{aligned}7 \times 10 + 3 \times (2 \times 10 + 1) \\&= 70 + 3 \times (20 + 1) \\&= 70 + 3 \times 21 \\&= 70 + 63 \\&= 133 \\13 \times 10 + 3 \\&= 130 + 3 \\&= 133\end{aligned}$$

$$\begin{aligned}2 \times (3b + 2) + 5 \times (b + 1) \\&= 6b + 4 + 5b + 5 \\&= 11b + 9\end{aligned}$$

Vérification :

$$\begin{aligned}2 \times (3 \times 10 + 2) + 5 \times \\(10 + 1) \\&= 2 \times (30 + 2) + 5 \times 11 \\&= 2 \times 32 + 55 \\&= 64 + 55 \\&= 119 \\11 \times 10 + 9 \\&= 110 + 9 \\&= 119\end{aligned}$$



Exercice 22 partie 2/2

$$\begin{aligned}2 \times (1 + 2x) + 3 \times (x + 4) \\&= 2 + 4x + 3x + 12 \\&= 7x + 14\end{aligned}$$

Vérification :

$$\begin{aligned}2 \times (1 + 2 \times 10) + 3 \times (10 + 4) \\&= 2 \times (1 + 20) + 3 \times 14 \\&= 2 \times 21 + 42 \\&= 42 + 42 \\&= 84 \\7 \times 10 + 14 \\&= 70 + 14 \\&= 84\end{aligned}$$

$$\begin{aligned}4 \times (2x + 3) + 2 \times (1 + 2x) \\&= 8x + 12 + 2 + 4x \\&= 12x + 14\end{aligned}$$

Vérification :

$$\begin{aligned}4 \times (2 \times 10 + 3) + 2 \times (1 + 2 \times 10) \\&= 4 \times (20 + 3) + 2 \times (1 + 20) \\&= 4 \times 23 + 2 \times 21 \\&= 92 + 42 \\&= 134 \\12 \times 10 + 14 \\&= 120 + 14 \\&= 134\end{aligned}$$

