



Exercice n°1 : Développer et réduire les expressions suivantes.

$$\mathcal{A} = 3(4 + 3y)$$

$$\mathcal{F} = 10(2 + 2t)$$

$$\mathcal{B} = 2(4b + 4)$$

$$\mathcal{G} = 6(3 + 9a)$$

$$\mathcal{C} = 7(10x + 6)$$

$$\mathcal{H} = 9(5x + 2)$$

$$\mathcal{D} = 8(2 + 7x)$$

$$\mathcal{I} = 4(7y + 10)$$

$$\mathcal{E} = 5(2b + 7)$$

$$\mathcal{J} = 2(10x + 3)$$

Exercice n°2 : Développer et réduire les expressions suivantes.

$$\mathcal{A} = 6(-9y + 3)$$

$$\mathcal{F} = -5(10b - 3)$$

$$\mathcal{B} = 3(8 - 9x)$$

$$\mathcal{G} = -2(-1 - y)$$

$$\mathcal{C} = 4(-9x - 3)$$

$$\mathcal{H} = -10(-3y - 2)$$

$$\mathcal{D} = -7(a + 10)$$

$$\mathcal{I} = 6(-8x + 9)$$

$$\mathcal{E} = -5(-9 + 9y)$$

$$\mathcal{J} = -2(3a - 9)$$

Exercice n°3 : Développer et réduire les expressions suivantes.

$$\mathcal{A} = 2(x - 1) + 3(5x - 7)$$

$$\mathcal{F} = 3x(1 - x) - 2(5 - 3x)$$

$$\mathcal{B} = -3(1 - x) + 10$$

$$\mathcal{G} = -3x(1 - x) + 5x(2 + 3x) - x^2$$

$$C = (3x + 4) \times 9 - 9x + 6$$

$$\mathcal{D} = x(x + 3) - 2x(5x - 3)$$

$$\mathcal{E} = 5(x - 1) + 3(2x + 1)$$

$$\mathcal{H} = 2x(-3x - 1) - 3(-4x + 7) - x^2 + x - 1$$

$$I = -2(x - 7) - 2(x^2 + x) + 4(x^2 + 1)$$

$$J = -6x(2x^2 - 3x) - 3(x + 4x^2) - x(-3 + 4x)$$



Correction

Exercice n°1 : Développer et réduire les expressions suivantes.

$$\begin{aligned} \mathcal{A} &= 3(4 + 3y) \\ \mathcal{A} &= 3 \times 4 + 3 \times 3y \\ \mathcal{A} &= 12 + 9y \end{aligned}$$

$$\begin{aligned} \mathcal{B} &= 2(4b + 4) \\ \mathcal{B} &= 2 \times 4b + 2 \times 4 \\ \mathcal{B} &= 8b + 8 \end{aligned}$$

$$\begin{aligned} \mathcal{C} &= 7(10x + 6) \\ \mathcal{C} &= 7 \times 10x + 7 \times 6 \\ \mathcal{C} &= 70x + 42 \end{aligned}$$

$$\begin{aligned} \mathcal{D} &= 8(2 + 7x) \\ \mathcal{D} &= 8 \times 2 + 8 \times 7x \\ \mathcal{D} &= 16 + 56x \end{aligned}$$

$$\begin{aligned} \mathcal{E} &= 5(2b + 7) \\ \mathcal{E} &= 5 \times 2b + 5 \times 7 \\ \mathcal{E} &= 10b + 35 \end{aligned}$$

$$\begin{aligned} \mathcal{F} &= 10(2 + 2t) \\ \mathcal{F} &= 10 \times 2 + 10 \times 2t \\ \mathcal{F} &= 20 + 20t \end{aligned}$$

$$\begin{aligned} \mathcal{G} &= 6(3 + 9a) \\ \mathcal{G} &= 6 \times 3 + 6 \times 9a \\ \mathcal{G} &= 18 + 54a \end{aligned}$$

$$\begin{aligned} \mathcal{H} &= 9(5x + 2) \\ \mathcal{H} &= 9 \times 5x + 9 \times 2 \\ \mathcal{H} &= 45x + 18 \end{aligned}$$

$$\begin{aligned} \mathcal{I} &= 4(7y + 10) \\ \mathcal{I} &= 4 \times 7y + 4 \times 10 \\ \mathcal{I} &= 28y + 40 \end{aligned}$$

$$\begin{aligned} \mathcal{J} &= 2(10x + 3) \\ \mathcal{J} &= 2 \times 10x + 2 \times 3 \\ \mathcal{J} &= 20x + 6 \end{aligned}$$

Exercice n°2 : Développer et réduire les expressions suivantes.

$$\begin{aligned} \mathcal{A} &= 6(-9y + 3) \\ \mathcal{A} &= 6 \times (-9y) + 6 \times 3 \\ \mathcal{A} &= -54y + 18 \end{aligned}$$

$$\begin{aligned} \mathcal{B} &= 3(8 - 9x) \\ \mathcal{B} &= 3 \times 8 + 3 \times (-9x) \\ \mathcal{B} &= 24 - 27x \end{aligned}$$

$$\begin{aligned} \mathcal{C} &= 4(-9x - 3) \\ \mathcal{C} &= 2 \times 4b + 2 \times 4 \\ \mathcal{C} &= -36x - 12 \end{aligned}$$

$$\begin{aligned} \mathcal{D} &= -7(a + 10) \\ \mathcal{D} &= -7 \times a + -7 \times 10 \\ \mathcal{D} &= -7a - 70 \end{aligned}$$

$$\begin{aligned} \mathcal{E} &= -5(-9 + 9y) \\ \mathcal{E} &= -5 \times (-9) - 5 \times 9y \\ \mathcal{E} &= 45 - 45y \end{aligned}$$

$$\begin{aligned} \mathcal{F} &= -5(10b - 3) \\ \mathcal{F} &= -5 \times 10b - 5 \times (-3) \\ \mathcal{F} &= -50b + 15 \end{aligned}$$

$$\begin{aligned} \mathcal{G} &= -2(-1 - y) \\ \mathcal{G} &= -2 \times (-1) - 2 \times (-y) \\ \mathcal{G} &= 2 + 2y \end{aligned}$$

$$\begin{aligned} \mathcal{H} &= -10(-3y - 2) \\ \mathcal{H} &= -10 \times (-3y) - 10 \times (-2) \\ \mathcal{H} &= 30y + 20 \end{aligned}$$

$$\begin{aligned} \mathcal{I} &= 6(-8x + 9) \\ \mathcal{I} &= 6 \times (-8x) + 6 \times 9 \\ \mathcal{I} &= -48x + 54 \end{aligned}$$

$$\begin{aligned} \mathcal{J} &= -2(3a - 9) \\ \mathcal{J} &= -2 \times 3a - 2 \times (-9) \\ \mathcal{J} &= -6a + 18 \end{aligned}$$

Exercice n°3 : Développer et réduire les expressions suivantes.

$$\begin{aligned} \mathcal{A} &= 2(x - 1) + 3(5x - 7) \\ \mathcal{A} &= 2 \times x + 2 \times (-1) + 3 \times 5x + 3 \times (-7) \\ \mathcal{A} &= 2x - 2 + 15x - 21 \\ \mathcal{A} &= 17x - 23 \end{aligned}$$

$$\begin{aligned} \mathcal{B} &= -3(1 - x) + 10 \\ \mathcal{B} &= -3 \times 1 - 3 \times (-x) + 10 \end{aligned}$$

$$\begin{aligned} \mathcal{F} &= 3x(1 - x) - 2(5 - 3x) \\ \mathcal{F} &= 3x \times 1 + 3x \times (-x) - 2 \times 5 - 2 \times (-3x) \\ \mathcal{F} &= 3x - 3x^2 - 10 + 6x \\ \mathcal{F} &= -3x^2 + 9x - 10 \end{aligned}$$

$$\mathcal{G} = -3x(1 - x) + 5x(2 + 3x) - x^2$$

$$B = -3 + 3x + 10$$

$$B = 3x + 7$$

$$C = (3x + 4) \times 9 - 9x + 6$$

$$C = -3x \times 9 + 4 \times 9 - 9x + 6$$

$$C = 27x + 36 - 9x + 6$$

$$C = 18x + 42$$

$$D = x(x + 3) - 2x(5x - 3)$$

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

$$D = x^2 + 3x - 10x^2 + 6x$$

$$D = -9x^2 + 9x$$

$$E = 5(x - 1) + 3(2x + 1)$$

$$E = 5 \times x + 5 \times (-1) + 3 \times 2x + 3 \times 1$$

$$E = 5x - 5 + 6x + 3$$

$$E = 11x - 2$$

$$G = -3x \times 1 - 3x \times (-x) + 5x \times 2 + 5x \times 3x - x^2$$

$$G = -3x + 3x^2 + 10x + 15x^2 - x^2$$

$$G = 17x^2 + 7x$$

$$H = 2x(-3x - 1) - 3(-4x + 7) - x^2 + x - 1$$

$$H = 2x \times (-3x) + 2x \times (-1) - 3 \times (-4x) - 3 \times 7 -$$

$$x^2 + x - 1$$

$$H = -6x^2 - 2x + 12x - 21 - x^2 + x - 1$$

$$H = -7x^2 + 11x - 22$$

$$I = -2(x - 7) - 2(x^2 + x) + 4(x^2 + 1)$$

$$I = -2 \times x - 2 \times (-7) - 2 \times x^2 - 2 \times x + 4 \times x^2 +$$

$$4 \times 1$$

$$I = -2x + 14 - 2x^2 - 2x + 4x^2 + 4$$

$$I = 2x^2 - 4x + 18$$

$$J = -6x(2x^2 - 3x) - 3(x + 4x^2) - x(-3 + 4x)$$

$$J = -6x \times 2x^2 - 6x \times (-3x) - 3 \times x -$$

$$3 \times 4x^2 - x \times (-3) - x \times 4x$$

$$J = -12x^3 + 18x^2 - 3x - 12x^2 + 3x - 4x^2$$

$$J = -12x^3 + 2x^2$$