

Corrigé de l'exercice 1

Réduire, si possible, les expressions suivantes :

▶1. $A = 9u^2 + 2u^2$

$$A = (9 + 2) \times u^2$$

$$A = 11u^2$$

▶2. $B = 6v^2 \times (-10)$

$$B = 6 \times (-10) \times v^2$$

$$B = -60v^2$$

▶3. $C = -9v^2 \times (-1)$

$$C = -9 \times (-1) \times v^2$$

$$C = 9v^2$$

▶4. $D = 10b^2 \times 6$

$$D = 10 \times 6 \times b^2$$

$$D = 60b^2$$

▶5. $E = 8f^2 - (-3)$

$$E = 8f^2 + 3$$

▶6. $F = -10r^2 - (-8r^2)$

$$F = -10r^2 + 8r^2$$

$$F = (-10 + 8) \times r^2$$

$$F = -2r^2$$

▶7. $G = 10p^2 \times 8$

$$G = 10 \times 8 \times p^2$$

$$G = 80p^2$$

▶8. $H = 9d^2 - 10d^2$

$$H = (9 - 10) \times d^2$$

$$H = -d^2$$

▶9. $I = -8g - (-7g)$

$$I = -8g + 7g$$

$$I = (-8 + 7) \times g$$

$$I = -g$$

Corrigé de l'exercice 2

Réduire les expressions littérales suivantes :

▶1. $A = -5s - 10s - 4 + 4 - 3s^2 - (-7s^2)$

$$A = -5s - 10s - 3s^2 - 4 + 4 + 7s^2$$

$$A = -3s^2 + 7s^2 - 5s - 10s - 4 + 4$$

$$A = (-3 + 7) \times s^2 + (-5 - 10) \times s + 0$$

$$A = 4s^2 - 15s + 0$$

$$A = 4s^2 - 15s$$

▶2. $B = 6w - 1 - 8w^2 + 3w^2 + 3w - 4$

$$B = -8w^2 + 3w^2 + 6w + 3w - 1 - 4$$

$$B = (-8 + 3) \times w^2 + (6 + 3) \times w - 5$$

$$B = -5w^2 + 9w - 5$$

▶3. $C = -6v - (-9) - 4v^2 - 4 - 5v^2 - v$

$$C = -6v + 9 - 4v^2 - 4 - 5v^2 - v$$

$$C = -4v^2 - 5v^2 - 6v - v + 9 - 4$$

$$C = (-4 - 5) \times v^2 + (-6 - 1) \times v + 5$$

$$C = -9v^2 - 7v + 5$$

▶4. $D = 7 \times (-y) \times (-6) \times 9y - (-9y^2)$

$$D = 7 \times (-1) \times (-6) \times 9 \times y \times y + 9y^2$$

$$D = 378y^2 + 9y^2$$

$$D = (378 + 9) \times y^2$$

$$D = 387y^2$$

▶5. $E = -6 \times (-2) \times t + 9t^2 - 9t$

$$E = 12t + 9t^2 - 9t$$

$$E = 9t^2 + 12t - 9t$$

$$E = 9t^2 + (12 - 9) \times t$$

$$E = 9t^2 + 3t$$

▶6. $F = -3y \times (-5) \times (-3y) \times (-2) - (-10y^2)$

$$F = -3 \times (-5) \times (-3) \times (-2) \times y \times y + 10y^2$$

$$F = 90y^2 + 10y^2$$

$$F = (90 + 10) \times y^2$$

$$F = 100y^2$$

Corrigé de l'exercice 3

Développer et réduire les expressions suivantes :

$$A = 4x(-4x - 10)$$

$$A = 4x \times (-4x) + 4x \times (-10)$$

$$A = -16x^2 - 40x$$

$$B = (-9x + 7) \times 10$$

$$B = 10 \times (-9x) + 10 \times 7$$

$$B = -90x + 70$$

$$C = 5x(-6x + 8)$$

$$C = 5x \times (-6x) + 5x \times 8$$

$$C = -30x^2 + 40x$$

$$D = -8x(-8x - 3)$$

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

$$D = 64x^2 + 24x$$

$$E = -3x(-8x + 9)$$

$$E = -3x \times (-8x) + (-3x) \times 9$$

$$E = 24x^2 - 27x$$

$$F = 2(-7x - 2)$$

$$F = 2 \times (-7x) + 2 \times (-2)$$

$$F = -14x - 4$$

$$G = (2x + 6) \times 2$$

$$G = 2 \times 2x + 2 \times 6$$

$$G = 4x + 12$$

$$H = -3(-4x - 2)$$

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

$$H = 12x + 6$$

Corrigé de l'exercice 4

Développer et réduire les expressions suivantes :

$$A = (-8x - 9)(5x + 6)$$

$$A = -40x^2 + (-48x) + (-45x) + (-54)$$

$$A = -40x^2 - 93x - 54$$

$$B = (-6x - 7)(-5x - 7)$$

$$B = 30x^2 + 42x + 35x + 49$$

$$B = 30x^2 + 77x + 49$$

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

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

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

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

$$D = 14x^2 + (-6x) + 7x + (-3)$$

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

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

$$E = 15x^2 + (-15x) + 35x + (-35)$$

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

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

$$F = 6x^2 + (-6x) + (-24x) + 24$$

$$F = 6x^2 - 30x + 24$$

Corrigé de l'exercice 5

Réduire, si possible, les expressions suivantes :

►1. $A = -2n^2 \times (-9)$

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

$$A = 18n^2$$

►2. $B = -9y \times 6y$

$$B = -9 \times 6 \times y \times y$$

$$B = -54y^2$$

►3. $C = -2t \times 5$

$$C = -2 \times 5 \times t$$

$$C = -10t$$

$$\blacktriangleright 4. D = -7x^2 \times (-2)$$

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

$$D = 14x^2$$

$$\blacktriangleright 5. E = 7s - 4s$$

$$E = (7 - 4) \times s$$

$$E = 3s$$

$$\blacktriangleright 6. F = 3 \times 4s^2$$

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

$$F = 12s^2$$

$$\blacktriangleright 7. G = 9w^2 \times 2$$

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

$$G = 18w^2$$

$$\blacktriangleright 8. H = 7 \times 6q^2$$

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

$$H = 42q^2$$

$$\blacktriangleright 9. I = -6t - 4t$$

$$I = (-6 - 4) \times t$$

$$I = -10t$$

Corrigé de l'exercice 6

Développer et réduire les expressions suivantes :

$$A = -6(6x - 10)$$

$$A = -6 \times 6x + (-6) \times (-10)$$

$$A = -36x + 60$$

$$B = (x + 7) \times (-8x)$$

$$B = -8x \times x + (-8x) \times 7$$

$$B = -8x^2 - 56x$$

$$C = (-8x + 6) \times (-6x)$$

$$C = -6x \times (-8x) + (-6x) \times 6$$

$$C = 48x^2 - 36x$$

$$D = (-10x + 9) \times 6x$$

$$D = 6x \times (-10x) + 6x \times 9$$

$$D = -60x^2 + 54x$$

$$E = -3(9x + 10)$$

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

$$E = -27x - 30$$

$$F = 9(4x - 10)$$

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

$$F = 36x - 90$$

$$G = (-8x - 2) \times 10x$$

$$G = 10x \times (-8x) + 10x \times (-2)$$

$$G = -80x^2 - 20x$$

$$H = 9(4x - 2)$$

$$H = 9 \times 4x + 9 \times (-2)$$

$$H = 36x - 18$$