

Corrigé de l'exercice 1

Réduire, si possible, les expressions suivantes :

▶1. $A = 4f^2 - 9f^2$

$$A = (4 - 9) \times f^2$$

$$A = -5f^2$$

▶2. $B = 10h^2 - (-5h^2)$

$$B = 10h^2 + 5h^2$$

$$B = (10 + 5) \times h^2$$

$$B = 15h^2$$

▶3. $C = 9g^2 \times 2$

$$C = 9 \times 2 \times g^2$$

$$C = 18g^2$$

▶4. $D = 8k - k$

$$D = (8 - 1) \times k$$

$$D = 7k$$

▶5. $E = 8w - 5w$

$$E = (8 - 5) \times w$$

$$E = 3w$$

▶6. $F = -8u - (-9)$

$$F = -8u + 9$$

▶7. $G = 7p \times 10$

$$G = 7 \times 10 \times p$$

$$G = 70p$$

▶8. $H = -6c \times 3$

$$H = -6 \times 3 \times c$$

$$H = -18c$$

▶9. $I = -7d^2 - (-10d^2)$

$$I = -7d^2 + 10d^2$$

$$I = (-7 + 10) \times d^2$$

$$I = 3d^2$$

Corrigé de l'exercice 2

Réduire les expressions littérales suivantes :

▶1. $A = 10 - 7b^2 - (-8b^2) + 9 - 10b - 6b$

$$A = 10 - 7b^2 + 8b^2 + 9 - 10b - 6b$$

$$A = -7b^2 + 8b^2 - 10b - 6b + 10 + 9$$

$$A = (-7 + 8) \times b^2 + (-10 - 6) \times b + 19$$

$$A = b^2 - 16b + 19$$

▶2. $B = -4c^2 - 6c - 3c^2 + 3 - 9c + 10$

$$B = -4c^2 - 3c^2 - 6c - 9c + 3 + 10$$

$$B = (-4 - 3) \times c^2 + (-6 - 9) \times c + 13$$

$$B = -7c^2 - 15c + 13$$

▶3. $C = 8u - (-9) - (-6u) - 9u^2 - (-4u^2) - 10$

$$C = 8u + 9 + 6u - 9u^2 + 4u^2 - 10$$

$$C = -9u^2 + 4u^2 + 8u + 6u + 9 - 10$$

$$C = (-9 + 4) \times u^2 + (8 + 6) \times u - 1$$

$$C = -5u^2 + 14u - 1$$

▶4. $D = -4u \times (-8u) \times 2 - 5u^2 + 10$

$$D = -4 \times (-8) \times 2 \times u \times u - 5u^2 + 10$$

$$D = 64u^2 - 5u^2 + 10$$

$$D = (64 - 5) \times u^2 + 10$$

$$D = 59u^2 + 10$$

▶5. $E = -3f^2 - 9f \times (-10f) \times 4 \times (-2)$

$$E = -3f^2 - 9 \times (-10) \times 4 \times (-2) \times f \times f$$

$$E = -3f^2 - 720f^2$$

$$E = (-3 - 720) \times f^2$$

$$E = -723f^2$$

▶6. $F = 7 \times (-r) \times 5r \times 8 - 5r^2$

$$F = 7 \times (-1) \times 5 \times 8 \times r \times r - 5r^2$$

$$F = -280r^2 - 5r^2$$

$$F = (-280 - 5) \times r^2$$

$$F = -285r^2$$

Corrigé de l'exercice 3

Développer et réduire les expressions suivantes :

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

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

$$A = 14x + 4$$

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

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

$$B = -24x^2 - 24x$$

$$C = 5x(8x - 9)$$

$$C = 5x \times 8x + 5x \times (-9)$$

$$C = 40x^2 - 45x$$

$$D = -8(-9x + 10)$$

$$D = -8 \times (-9x) + (-8) \times 10$$

$$D = 72x - 80$$

$$E = (-5x - 9) \times (-3)$$

$$E = -3 \times (-5x) + (-3) \times (-9)$$

$$E = 15x + 27$$

$$F = (-6x - 5) \times (-10)$$

$$F = -10 \times (-6x) + (-10) \times (-5)$$

$$F = 60x + 50$$

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

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

$$G = 9x - 24$$

$$H = -2(6x + 4)$$

$$H = -2 \times 6x + (-2) \times 4$$

$$H = -12x - 8$$

Corrigé de l'exercice 4

Développer et réduire les expressions suivantes :

$$A = (3x - 3)(-6x - 6)$$

$$A = -18x^2 + (-18x) + 18x + 18$$

$$A = -18x^2 + 18$$

$$B = (-7x - 9)(-6x - 1)$$

$$B = 42x^2 + 7x + 54x + 9$$

$$B = 42x^2 + 61x + 9$$

$$C = (-7x + 6)(10x + 8)$$

$$C = -70x^2 + (-56x) + 60x + 48$$

$$C = -70x^2 + 4x + 48$$

$$D = (3x + 1)(8x + 10)$$

$$D = 24x^2 + 30x + 8x + 10$$

$$D = 24x^2 + 38x + 10$$

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

$$E = -27x^2 + (-90x) + 30x + 100$$

$$E = -27x^2 - 60x + 100$$

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

$$F = -10x^2 + (-60x) + 6x + 36$$

$$F = -10x^2 - 54x + 36$$

Corrigé de l'exercice 5

Réduire, si possible, les expressions suivantes :

►1. $A = -10 \times 7y^2$

$$A = -10 \times 7 \times y^2$$

$$A = -70y^2$$

►2. $B = 2b \times (-9b)$

$$B = 2 \times (-9) \times b \times b$$

$$B = -18b^2$$

►3. $C = 7h \times (-2h)$

$$C = 7 \times (-2) \times h \times h$$

$$C = -14h^2$$

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

$$D = 7 \times (-4) \times b^2$$

$$D = -28b^2$$

$$\blacktriangleright 5. E = 4 \times (-7b)$$

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

$$E = -28b$$

$$\blacktriangleright 6. F = -6q - 7q$$

$$F = (-6 - 7) \times q$$

$$F = -13q$$

$$\blacktriangleright 7. G = -5 \times (-7b)$$

$$G = -5 \times (-7) \times b$$

$$G = 35b$$

$$\blacktriangleright 8. H = 8 \times 7z$$

$$H = 8 \times 7 \times z$$

$$H = 56z$$

$$\blacktriangleright 9. I = 10x - 5x$$

$$I = (10 - 5) \times x$$

$$I = 5x$$

Corrigé de l'exercice 6

Développer et réduire les expressions suivantes :

$$A = (6x - 3) \times (-3x)$$

$$A = -3x \times 6x + (-3x) \times (-3)$$

$$A = -18x^2 + 9x$$

$$B = 2x(-9x - 6)$$

$$B = 2x \times (-9x) + 2x \times (-6)$$

$$B = -18x^2 - 12x$$

$$C = (7x + 5) \times 6x$$

$$C = 6x \times 7x + 6x \times 5$$

$$C = 42x^2 + 30x$$

$$D = (3x - 6) \times 2$$

$$D = 2 \times 3x + 2 \times (-6)$$

$$D = 6x - 12$$

$$E = (2x - 4) \times 9x$$

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

$$E = 18x^2 - 36x$$

$$F = (2x - 9) \times (-x)$$

$$F = -x \times 2x + (-x) \times (-9)$$

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

$$G = 9x(2x - 5)$$

$$G = 9x \times 2x + 9x \times (-5)$$

$$G = 18x^2 - 45x$$

$$H = -10x(-8x + 5)$$

$$H = -10x \times (-8x) + (-10x) \times 5$$

$$H = 80x^2 - 50x$$