

Factorisation par facteur commun - Correction

Exercice 1 Factoriser les expressions suivantes :

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

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

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

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

$$B = 5x(2 - 3x) - 5x(4x + 1)$$

$$B = 5x(2 - 3x - (4x + 1))$$

$$B = 5x(2 - 3x - 4x - 1)$$

$$B = 5x(-7x + 1)$$

$$C = 3n(2 - 5n) + (2 - 5n)$$

$$C = (2 - 5n) \times 3n + (2 - 5n) \times 1$$

$$C = (2 - 5n)(3n + 1)$$

$$D = 4(1 - x)^2 - 3(1 - x)$$

$$D = (1 - x) \times 4(1 - x) - (1 - x) \times 3$$

$$D = (1 - x)(4(1 - x) - 3)$$

$$D = (1 - x)(4 - 4x - 3)$$

$$D = (1 - x)(-4x + 1)$$

$$E = a^2 + 3ab$$

$$E = a \times a + a \times 3b$$

$$E = a(a + 3b)$$

$$F = a^2 - 3a^2b$$

$$F = a^2 \times 1 - a^2 \times 3b$$

$$F = a^2(1 - 3b)$$

$$G = a^2b - 3ab^3$$

$$G = ab \times a - ab \times 3b^2$$

$$G = ab(a - 3b^2)$$

$$H = 2xy^2 + x^2y + xy$$

$$H = xy \times 2y + xy \times x + xy \times 1$$

$$H = xy(2y + x + 1)$$

$$I = 5(1 - 3n)^2 + 1 - 3n$$

$$I = (1 - 3n) \times 5(1 - 3n) + (1 - 3n) \times 1$$

$$I = (1 - 3n)(5(1 - 3n) + 1)$$

$$I = (1 - 3n)(5 - 15n + 1)$$

$$I = (1 - 3n)(-15n + 6)$$

Exercice 2

Faire apparaître un facteur commun, puis factoriser :

$$J = 2x(3 - x) + 8x(5 - 2x)$$

$$J = 2x \times (3 - x) + 2x \times 4(5 - 2x)$$

$$J = 2x(3 - x + 4(5 - 2x))$$

$$J = 2x(3 - x + 20 - 8x)$$

$$J = 2x(-9x + 23)$$

$$L = x^2 - 4 - (x - 2)(3 - 2x)$$

$$L = (x - 2)(x + 2) - (x - 2)(3 - 2x)$$

$$L = (x - 2)(x + 2 - (3 - 2x))$$

$$L = (x - 2)(x + 2 - 3 + 2x)$$

$$L = (x - 2)(3x - 1)$$

$$M = 7n(2 - 3n) + 4 - 6n$$

$$M = 7n(2 - 3n) + 2(2 - 3n)$$

$$M = (2 - 3n) \times 7n + (2 - 3n) \times 2$$

$$M = (2 - 3n)(7n + 2)$$