

EXERCICE 1

Souligner le **facteur commun** dans chaque expression:

$$A = \underline{3x} + \underline{3y}$$

$$B = -3a + 3b$$

$$C = 7x + 12x$$

$$D = -6(3x - 2) - (3x - 2)(x - 4)$$

$$E = (x + 2)(x + 1) + (x + 2)(7x - 5)$$

$$F = (2x + 1)^2 + (2x + 1)(x + 3)$$

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

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

$$I = (6x + 4)(2 + 3x) + (2 + 3x)(7 - x)$$

$$J = (3 + x)(5x + 2) + (x + 3)^2$$

EXERCICE 2

Factoriser chaque expression en utilisant la règle

« $ka + kb = k(a + b)$ » :

$$A = 4x + 4y = 4(x + y)$$

$$B = 6 \times 9 + 6 \times 3 =$$

$$C = 8a + 8b =$$

$$D = 5 \times 3 + 3 \times 14 =$$

$$E = 2 + 2x =$$

$$F = 7a + 7 =$$

$$G = 4x^2 + 4x =$$

$$H = 6y + 6y^2 =$$

$$I = 3x^2 + 5x =$$

$$J = 2ab + b^2 =$$

EXERCICE 5

Factoriser les expressions suivantes comme dans l'exemple :

$$Z = 5(x + 1) + 3(x + 1)$$

$$Z = (x + 1)(5 + 3)$$

$$Z = 8(x + 1)$$

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

$$A = 13(x + 2) + 5(x + 2)$$

$$D = 4(x + 3) + 9x(x + 3)$$

$$B = 7(2x - 3) + 2(2x - 3)$$

$$E = 7x(3x + 1) - 10x(3x + 1)$$

EXERCICE 3

Compléter l'intérieur des parenthèses, comme dans l'exemple :

$$A = 4a + 12 = 4(a + 3)$$

$$B = 2x + 6y = 2()$$

$$C = 5x^2 - 30x = 5x()$$

$$D = 5(x - 1) + 3x(x - 1) = (x - 1)()$$

$$E = 15x - 20y = 5()$$

$$F = -7xy + 14y = 7y()$$

$$G = a + 2ax = a()$$

$$H = 3x^2 + x = x()$$

$$I = 7x(x + 3) - 6(x + 3) = (x + 3)()$$

$$J = 4xy^2 + 12x^2y = 4xy()$$

EXERCICE 4

Écrire le terme souligné sous forme d'un produit puis factoriser l'expression :

$$A = 4a + \underline{12} = 4a + 4 \times 3 = 4(a + 3)$$

$$B = 5x + \underline{10} = =$$

$$C = 6x - \underline{24} = =$$

$$D = \underline{36} - 4x = =$$

$$E = 7x + \underline{14} = =$$

$$F = \underline{35} - 5x = =$$

$$G = 8x - \underline{24} = =$$

$$H = \underline{12x} + \underline{18} = =$$

$$I = \underline{6} - \underline{15x} = =$$

$$J = \underline{30x} - \underline{42} = =$$