

EXERCICE 1

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

A = 3x + 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 × 9 + 6 × 3 =

C = 8a + 8b =

D = 5 × 3 + 3 × 14 =

E = 2 + 2x =

F = 7a + 7 =

G = 4x² + 4x =

H = 6y + 6y² =

I = 3x² + 5x =

J = 2ab + b² =

EXERCICE 5

Factoriser les expressions suivantes comme dans l'exemple :

<p>Z = 5(x + 1) + 3(x + 1)</p> <p>Z = (x + 1)(5 + 3)</p> <p>Z = 8(x + 1)</p>	<p>A = 13(x + 2) + 5(x + 2)</p>	<p>B = 7(2x - 3) + 2(2x - 3)</p>
<p>C = 3x(x + 2) - 5(x + 2)</p>	<p>D = 4(x + 3) + 9x(x + 3)</p>	<p>E = 7x(3x + 1) - 10x(3x + 1)</p>

EXERCICE 3

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

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

B = 2x + 6y = 2 ()

C = 5x² - 30x = 5x ()

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

E = 15x - 20y = 5 ()

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

G = a + 2ax = a ()

H = 3x² + x = x ()

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

J = 4xy² + 12x²y = 4xy ()

EXERCICE 4

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

A = 4a + 12 = 4a + 4 × 3 = 4(a + 3)

B = 5x + 10 = =

C = 6x - 24 = =

D = 36 - 4x = =

E = 7x + 14 = =

F = 35 - 5x = =

G = 8x - 24 = =

H = 12x + 18 = =

I = 6 - 15x = =

J = 30x - 42 = =

CORRIGE – M . QUET

EXERCICE 1 Souligner le facteur commun

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

$$B = -\underline{3}a + \underline{3}b$$

$$C = 7\underline{x} + 12\underline{x}$$

$$D = -6(\underline{3x-2}) - (\underline{3x-2})(x-4)$$

$$E = (\underline{x+2})(x+1) + (\underline{x+2})(7x-5)$$

$$F = (\underline{2x+1})^2 + (\underline{2x+1})(x+3)$$

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

$$H = (\underline{3x-4})(2-x) - (\underline{3x-4})^2$$

$$I = (6x+4)(\underline{2+3x}) + (\underline{2+3x})(7-x)$$

$$J = (\underline{x+3})(5x+2) + (\underline{x+3})^2$$

EXERCICE 2 « $ka + kb = k(a + b)$ »

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

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

$$C = 8a + 8b = 8(a + b)$$

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

$$E = 2 + 2x = 2(1 + x)$$

$$F = 7a + 7 = 7(a + 1)$$

$$G = 4x^2 + 4x = 4x(x + 1)$$

$$H = 6y + 6y^2 = 6y(1 + y)$$

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

$$J = 2ab + b^2 = b(2a + b)$$

EXERCICE 3

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

$$B = 2x + 6y = 2(x + 3y)$$

$$C = 5x^2 - 30x = 5x(x - 6)$$

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

$$E = 15x - 20y = 5(3x - 4y)$$

$$F = -7xy + 14y = 7y(-x + 2)$$

$$G = a + 2ax = a(1 + 2x)$$

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

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

$$J = 4xy^2 + 12x^2y = 4xy(y + 3x)$$

EXERCICE 4

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

$$B = 5x + \underline{10} = 5x + 5 \times 2 = 5(x + 2)$$

$$C = 6x - \underline{24} = 6x - 6 \times 4 = 6(x - 4)$$

$$D = \underline{36} - 4x = 4 \times 9 - 4x = 4(9 - x)$$

$$E = 7x + \underline{14} = 7x + 7 \times 2 = 7(x + 2)$$

$$F = \underline{35} - 5x = 5 \times 7 - 5x = 5(7 - x)$$

$$G = 8x - \underline{24} = 8x - 8 \times 3 = 8(x - 3)$$

$$H = \underline{12x} + \underline{18} = 6 \times 2x + 6 \times 3 = 6(2x + 3)$$

$$I = \underline{6} - \underline{15x} = 3 \times 2 - 3 \times 5x = 3(2 - 5x)$$

$$J = \underline{30x} - \underline{42} = 6 \times 5x - 6 \times 7 = 6(5x - 7)$$

EXERCICE 5

Factoriser les expressions suivantes comme dans l'exemple :

$Z = 5(x+1) + 3(x+1)$ $Z = (x+1)(5+3)$ $Z = 8(x+1)$	$A = 13(x+2) + 5(x+2)$ $A = (x+2)(13+5)$ $A = 18(x+2)$	$B = 7(2x-3) + 2(2x-3)$ $B = (2x-3)(7+2)$ $B = 9(2x-3)$
$C = 3x(x+2) - 5(x+2)$ $C = (x+2)(3x-5)$	$D = 4(x+3) + 9x(x+3)$ $D = (x+3)(4+9x)$	$E = 7x(3x+1) - 10x(3x+1)$ $E = (3x+1)(7x-10x)$