

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 :

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