CORRIGE – M . QUET

EXERCICE 1   Souligner le **facteur commun**

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

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

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

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

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

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

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

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

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

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

EXERCICE 3

A =	4a + 12	=	4 (	a + 3	)
B =	2x + 6y	=	2 (	**x + 3y**	)
C =	5x² − 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 =	3x² + x	=	x (	**3x + 1**	)
I =	7x(x + 3) − 6(x + 3)	=	(x + 3) (	**7x − 6**	)
J =	4xy² + 12x²y	=	4xy (	**y + 3x**	)

EXERCICE 2   « ka + kb = k(a + b) »

A =	4x + 4y	=	4(x + y)
B =	6 × 9 + 6 × 3	=	**6(9 + 3)**
C =	8a + 8b	=	**8(a + b)**
D =	5 × 3 + 3 × 14	=	**3(5 + 14)**
E =	2 + 2x	=	**2(1 + x)**
F =	7a + 7	=	**7(a + 1)**
G =	4x² + 4x	=	**4x(x + 1)**
H =	6y + 6y²	=	**6y(1 + y)**
I =	3x² + 5x	=	**x(3x + 5)**
J =	2ab + b²	=	**b(2a + b)**

EXERCICE 4

A =	4a + <u>12</u>	=	4a + 4 × 3	=	4(a + 3)
B =	5x + <u>10</u>	=	**5x + 5 × 2**	=	**5(x + 2)**
C =	6x − <u>24</u>	=	**6x − 6 × 4**	=	**6(x − 4)**
D =	<u>36</u> − 4x	=	**4 × 9 − 4x**	=	**4(9 − x)**
E =	7x + <u>14</u>	=	**7x + 7 × 2**	=	**7(x + 2)**
F =	<u>35</u> − 5x	=	**5 × 7 − 5x**	=	**5(7 − x)**
G =	8x − <u>24</u>	=	**8x − 8 × 3**	=	**8(x − 3)**
H =	<u>12</u>x + <u>18</u>	=	**6 × 2x + 6 × 3**	=	**6(2x + 3)**
I =	<u>6</u> − <u>15</u>x	=	**3 × 2 − 3 × 5x**	=	**3(2 − 5x)**
J =	<u>30</u>x − <u>42</u>	=	**6 × 5x − 6 × 7**	=	**6(5x − 7)**

EXERCICE 5

Factoriser les expressions suivantes comme dans l'exemple :

Z = 5(<u>x + 1</u>) + 3(<u>x + 1</u>)	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)