

$$\cdot a(b+c) = a \times b + a \times c$$

$$\cdot (a+b)(c+d) = a \times c + a \times d + b \times c + b \times d$$

exercice 2:

$$\cdot 7x^2 - 5x + 13 - 4x - 11x^2 + 7$$

$$= -4x^2 - 9x - 4$$

$$\cdot -12x + 15 + 13x - 17x^2$$

$$+ 16x^2 - 15$$

$$= x + 0 - x^2$$

exercice 3:

$$\bullet -5g(g-3)$$

$$= -5g \times g + (-5g) \times (-3)$$

$$= -5g^2 + 15g$$

$$\bullet 2(3y-8)$$

$$= 2 \times 3y + 2 \times (-8)$$

$$= 6y - 16$$

$$\bullet 3x(5-4x)$$

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

$$= 15 - 12x$$

$$\cdot -t(2t-5)$$

$$= -t \times 2t + (-t) \times (-5)$$

$$= -2t^2 + 5t$$

$$\underline{x(x-1)} + \underline{x(x+1)}$$

$$= \underline{x \times x + x \times (-1)} + \underline{x \times x + x \times 1}$$

$$= \textcircled{x^2} - \cancel{\textcircled{x}} + \textcircled{x^2} + \cancel{\textcircled{x}}$$

$$= 2x^2$$

$$x(x-1) - x(x+1)$$

$$= x \times x + x \times (-1) - x \times x - x \times 1$$

$$= \cancel{x^2} - x - \cancel{x'} - x$$

$$= -2x$$

$$\bullet 3y(7-y) + 7(2-3y)$$

$$= 3y \times 7 + 3y \times -y + 7 \times 2 + 7 \times (-3y)$$

$$= \cancel{21y} - 3y^2 + 14 - \cancel{21y}$$

$$= -3y^2 + 14$$

$$\bullet -5y(2y-8) - y(7-6y)$$

$$= -5y \times 2y + (-5y) \times (-8) + (-y) \times 7 + (-y) \times (-6y)$$

$$= -10y^2 + 40y - 7y + 6y^2$$

$$= -4y^2 + 33y -$$

exercice 4 :

$$\bullet (z + 9)(z + 4)$$

$$= z \times z + z \times 4 + 9 \times z + 9 \times 4$$

$$= z^2 + 4z + 9z + 36$$

$$= z^2 + 13z + 36$$

$$\bullet (r - 4)(r - 7)$$

$$= r \times r - r \times 7 - 4 \times r + 4 \times 7$$

$$= r^2 - 7r - 4r + 28$$

$$= r^2 - 11r + 28$$

$$\cdot (z - 5)(z + 6)$$

$$= z \times z - 5 \times 6 - 5 \times z + z \times 6$$

$$= z^2 - 30 - 5z + 6z$$

$$= z^2 - 30 + z$$