

CaDad Dittéral

exercice : Développer.

$$A = 5(x - 3)$$

$$= 5 \times x - 5 \times 3$$

$$= 5x - 15$$

$$B = 6x(7 - 4x)$$

$$= 6x \times 7 - 6x \times 4x$$

$$= 42x - 24x^2$$

$$C = (x + 1)(x + 3)$$

$$= x \times x + x \times 3 + 1 \times x + 1 \times 3$$

$$= x^2 + 3x + x + 3$$

$$= x^2 + 4x + 3$$

$$D = (2x + 8)(x + 5)$$

$$= 2x \times x + 2x \times 5 + 8 \times x + 8 \times 5$$

$$= 2x^2 + 10x + 8x + 40$$

$$= 2x^2 + 18x + 40$$

$$E = (4x - 1)(x + 2)$$

$$= 4x \times x + 4x \times 2 - 1 \times x - 1 \times 2$$

$$= 4x^2 + 8x - x - 2$$

$$= 4x^2 + 7x - 2.$$

$$F = (5x + 4)(4x + 7)$$

$$= 5x \times 4x + 5x \times 7 + 4x \times 4x + 4x \times 7$$

$$= 20x^2 + 35x + 16x + 28$$

$$= 20x^2 + 51x + 28.$$

$$G = (7x - 4)(2x - 1) + 2(3x - 2)$$

$$= 7x \times 2x - 7x \times 1 - 4 \times 2x - 4 \times 1 + 2 \times 3x + 2 \times 1$$

$$= 14x^2 - 7x - 8x + 4 + 6x + 2$$

$$= 14x^2 - 9x$$

Identités remarquables

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

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

$$(a - b)(a + b) = a^2 - b^2$$

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

$$= (4x)^2 + 2 \times 4x \times 3 + 3^2$$

$$= 16x^2 + 24x + 9$$

$$I = (7x - 2)^2$$

$$= (7x)^2 - 2 \times 7x \times 2 + 2^2$$

$$= 49x^2 - 28x + 4$$

$$J = (5x - 4)(5x + 4)$$

$$= (5x)^2 - 4^2$$

$$= 25x^2 - 16.$$

$$K = (7x - 5)^2$$

$$= 49x^2 - 2 \times 7x \times 5 + 25$$

$$= 49x^2 - 70x + 25.$$

$$L = (6 - 2x)(6 + 2x)$$

$$= 6^2 - (2x)^2$$

$$= 36 - 4x^2$$

exercice : Factoriser.

chercher ce qui se répète.

$$A = 3x - 21$$

$$= 3 \times x - 3 \times 7$$

$$= 3(x - 7)$$

$$B = 12x^2 + 4$$

$$= 4 \times 3x^2 + 4 \times 1$$

$$= 4(3x^2 + 1)$$

$$C = 2x^2 + 5x$$

$$= 2 \times \cancel{x} \times x + 5 \times \cancel{x}$$

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

$$D = 3x - 7x^2$$

$$= 3 \times \cancel{x} - 7 \times \cancel{x} \times \cancel{x}$$

$$= x(3 - 7x)$$

$$E = 30x^2 + 15x$$

$$= 30 \times x \times x + 15 \times x$$

$$= 15 \times 2 \times x \times x + 15 \times x \times 1$$

$$= 15x (2x + 1)$$

$$F = 36x - 24x^2$$

$$= 36 \times x - 24 \times x \times x$$

$$= 6 \times 6 \times x - 6 \times 4 \times x \times x$$

$$= 6x (6 - 4x)$$

$$= 6x (3 \times 2 - 2 \times 2x)$$

$$= 2 \times 6x (3 - 2x)$$

$$= 12x (3 - 2x).$$