

RÉDUCTION

(somme)

$$A = 2x - 6x^2 + 8x - 7 + 10x + 72 = 2x + (-6x^2) + 8x + (-7) + 10x + 72 = 20x + (-6x^2) + 65$$

$$B = 6x - 6 + 10x + 5y + 10 - y = 6x + (-6) + 10x + 5y + 10 + (-y) = 16x + 4 + 4y$$

$$C = 10x + 5x^2 + 10y - 6 + 12y - 12x = 10x + 5x^2 + 10y + (-6) + 12y + (-12x) = -2x + 5x^2 + (-6) + 22y$$

(produit)

$$D = 5 \times 6 \times y \times 8 \times 10 \times y^2 = 5 \times 6 \times y \times 8 \times 10 \times y^2 = 5 \times 6 \times 8 \times 10 \times y \times y^2 = 2400 \times y^3 = 2400 y^3$$

$$E = 2x \times 5x^2 \times 5 \times 10y = 2 \times x \times 5 \times x^2 \times 5 \times 10 \times y = 2 \times 5 \times 5 \times 10 \times x \times x^2 \times y = 500 \times x^3 \times y = 500 x^3 y$$

$$F = 10x \times 9y \times x^2 \times 2x = 10 \times x \times 9 \times y \times x^2 \times 2 \times x = 10 \times 9 \times 2 \times x \times x^2 \times x \times y = 180 \times x^4 \times y = 180 x^4 y$$

(mix)

$$G = 10x \times 3 + x \times 6x - 5 \times 3x + x^2 = 30x + 6x^2 - 15x + x^2 = 30x + 6x^2 + (-15x) + x^2 = 15x + 7x^2$$

$$H = 5x^2 \times 2 + 10x \times x + y \times 5x + 2xy = 10x^2 + 10x^2 + 5xy + 2xy = 20x^2 + 7xy$$

$$\begin{aligned} I &= 5x \times 9x + x \times x - 9 \times 6x^2 + 5x \times 2 + 10 + (-x) = 45x^2 + x^2 - 54x^2 + 10x + 10 + (-x) \\ &= 45x^2 + x^2 - 54x^2 + 10x + 10 + (-x) = 45x^2 + x^2 + (-54x^2) + 10x + 10 + (-x) = -8x^2 + 9x + 10 \end{aligned}$$

DÉVELOPPEMENT

Développer et réduire (simple)

$$A = 2 \times (5x + 3) = 2 \times 5x + 2 \times 3 = 10x + 6$$

$$B = 10(4x - 3) = 10 \times 4x - 10 \times 3 = 40x - 30$$

$$C = (10x - 1) \times 3 = 10x \times 3 - 1 \times 3 = 30x - 3$$

$$D = (2x + 7) \times 4 = 2x \times 4 + 7 \times 4 = 8x + 28$$

$$E = 2x \times (4x - 3) = 2x \times 4x - 2x \times 3 = 8x^2 - 6x$$

$$F = -5x \times (5 - 3x) = -5x \times 5 - (-5x) \times 3x = -25x - (-15x^2) = -25x + 15x^2$$

$$G = -7x(10 + 7x) = -7x \times 10 + (-7x \times 7x) = -70x + (-49x^2)$$

FACTORISATION

(simple)

$$A=6\times 3+6\times 2t=6(3+2t)$$

$$B=5\times 2+2\times 10t=2(5+10t)$$

$$C=10\times 1+5x\times 10=10(1+5x)$$

$$D=(-5)\times 10-3x(-5)=(-5)\times (10-3x)$$

(confirmé)

$$E=12x+6y=6\times 2x+6\times y=6(2x+y)$$

$$F=15-3y=3\times 5-3\times y=3(5-y)$$

$$G=2+8x=2\times 1+2\times 4x=2(1+4x)$$

$$H=3x+7x^2=x\times 3+x\times 7x=x(3+7x)$$

$$I=12x-12=12\times x-12\times 1=12(x-1)$$

DOUBLE DÉVELOPPEMENT

$$J=(5x+4)(3x+2)=5x\times 3x+5x\times 2+4\times 3x+4\times 2=15x^2+10x+12x+8=15x^2+22x+8$$

$$K=(2x+3)(x-3)=(2x+3)(x+(-3))=2x\times x+2x\times (-3)+3\times x+3\times (-3)=2x^2+(-6x)+3x+(-9)$$

$$K=2x^2+(-3x)+(-9)$$

$$L=(3-x)(x-4)=(3+(-x))(x+(-4))=3\times x+3\times (-4)+(-x)\times x+(-x)\times (-4)=3x+(-12)+(-x^2)+4x$$

$$L=7x+(-12)+(-x^2)$$

$$M=(2x-1)(3x-5)=(2x+(-1))(3x+(-5))=2x\times 3x+2x\times (-5)+(-1)\times 3x+(-1)\times (-5)$$

$$M=6x^2+(-10x)+(-3x)+5=6x^2+(-13x)+5$$