Corrigé Test calcul littéral

Exercice 1

$A = 5(x+2)$
$= 5 \times x + 5 \times 2$
$= \underline{5x + 10}$

$B = 3(6-x)$
$= 3 \times 6 + 3 \times (-x)$
$= \underline{18 - 3x}$

$C = -5(-x+2)$
$= -5 \times (-x) + (-5) \times 2$
$= \underline{5x - 10}$

$D = (x+1)(3x+4)$
$= x \times 3x + x \times 4 + 1 \times 3x + 1 \times 4$
$= 3x^2 + 4x + 3x + 4$
$= \underline{3x^2 + 7x + 4}$

$E = (-2x+5)(6-2x)$
$= -2x \times 6 + (-2x) \times (-2x) + 5 \times 6 + 5 \times (-2x)$
$= -12x + 4x^2 + 30 - 10x$
$= \underline{4x^2 - 22x + 30}$

$F = (x-4)(3x-6)$
$= x \times 3x + x \times (-6) + (-4) \times 3x + (-4) \times (-6)$
$= 3x^2 - 6x - 12x + 24$
$= \underline{3x^2 - 18x + 24}$

$G = 3(2x-5) + (2x-4)$
$= 3 \times 2x + 3 \times (-5) + 2x - 4$
$= 6x - 15 + 2x - 4$
$= \underline{8x - 19}$

$H = -5(x-3) - 2(x+2)$
$= -5 \times x + (-5) \times (-3) - 2 \times x + (-2) \times 2$
$= -7x + 15 - 2x - 4$
$= \underline{-12x + 11}$

Exercice 2

$A = (x+2)^2$
$= \underline{x^2 + 4x + 4}$

$B = (3-5x)^2$
$= 9 - 2 \times 3 \times 5x + 25x^2$
$= \underline{9 - 30x + 25x^2}$

$C = (x+5)(x-5)$
$= \underline{x^2 - 25}$

$D = (2-x)(2+x)$
$= \underline{4 - x^2}$

Exercício 3

$A = 2x + 4$

$= \underline{2} \times x + \underline{2} \times 2$

$= \underline{2(x+2)}$

$B = x^2 + 5x$

$= x \times \underline{x} + 5 \times \underline{x}$

$= \underline{x(x+5)}$

$C = 12x - 12$

$= \underline{12} \times x - \underline{12} \times 1$

$= \underline{12(x-1)}$

$D = 4x - 16$

$= \underline{4} \times x - \underline{4} \times 4$

$= \underline{4(x-4)}$

Exercício 4

$A = x^2 - 2x + 1$

$= \underline{(x-1)^2}$

$B = 4x^2 + 12x + 9$

$= (2x)^2 + 12x + 3^2$

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

$C = x^2 - 25$

$= \underline{(x+5)(x-5)}$

$D = 45 - 25x^2$

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

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

Bonus.

$A = \underline{(2x+1)}(4x-3) + \underline{(2x+1)}(5-x)$

$= (2x+1)(4x-3+(5-x))$

$= (2x+1)(4x-3+5-x)$

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

$B = (6x+1)^2 - (3x-1)(6x+1)$

$= (6x+1)\underline{(6x+1)} - (3x-1)\underline{(6x+1)}$

$= (6x+1)(6x+1-(3x-1))$

$= (6x+1)(6x+1-3x+1)$

$= \underline{(6x+1)(3x+2)}$