# Corrigé Test 8 — wb

## Exercice 1

$A = 3x^2 - 2x + 6 - x^2 + 3x - 10$

$= 3x^2 - x^2 - 2x + 3x + 6 - 10$

$= 2x^2 + x - 4$

$B = -6 + 3x - 4x^2 - 7x + 3x^2 - 4$

$= -4x^2 + 3x^2 + 3x - 7x - 6 - 4$

$= -x^2 - 4x - 10$

## Exercice 2

$C = 2x^2 - 5 - (2 - 3x) + (x^2 + x - 5)$

$= 2x^2 - 5 - 2 + 3x + x^2 + x - 5$

$= 2x^2 + x^2 + 3x + x - 5 - 2 - 5$

$= 3x^2 + 4x - 12$

$D = -(12 - x) + (x - 8)$

$= -12 + x + x - 8$

$= 2x - 20$

## Exercice 3

$E = -6(2x - 3)$

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

$= -12x + 18$

$F = 9x(-2x + 3)$

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

$= -18x^2 + 27x$

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

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

$= -6x + 8 - 10x - 5$

$= -16x + 3$

$H = (2x - 5)(-2 + 4x)$

$= 2x \times (-2) + 2x \times 4x + (-5) \times (-2) + (-5) \times 4x$

$= -4x + 8x^2 + 10 - 20x$

$= 8x^2 - 24x + 10$

$I = (3x - 1)^2$

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

$= 3x \times 3x + 3x \times (-1) + (-1) \times 3x + (-1) \times (-1)$

$= 9x^2 - 3x - 3x + 1 = 9x^2 - 6x + 1$

$J = (-x+6)(3x-5)$

$= -x \times 3x + (-x) \times (-5) + 6 \times 3x + 6 \times (-5)$

$= -3x^2 + 5x + 18x - 30$

$= -3x^2 + 23x - 30$

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

$= 2x + 2x \times (-4x) + \left( x \times 2 + x \times 5x + (-5) \times 2 + (-5) \times 5x \right)$

$= 2x - 8x^2 + 2x + 5x^2 - 10 - 25x$

$= -3x^2 - 21x - 10$

$L = -2x(x^2 + 5x - 1) - (x-1)^2$

$= -2x \times (x^2) + (-2x) \times 5x + (-2x) \times (-1) - \left( (x-1)(x-1) \right)$

$= -2x^3 - 10x^2 + 2x - \left( x^2 - x - x + 1 \right)$

$= -2x^3 - 10x^2 + 2x - x^2 + x + x - 1$

$= -2x^3 - 11x^2 + 4x - 1$

# Corrigé Test 8 - va

## Exercice 1

$$A = 2x^2 - 6x + 5 - x^2 + 5x - 7$$
$$= 2x^2 - x^2 - 6x + 5x + 5 - 7$$
$$= x^2 - x - 2$$

$$B = -4 + 2x - 8x^2 - 5x + 2x^2 + 5$$
$$= -8x^2 + 2x^2 + 2x - 5x - 4 + 5$$
$$= -6x^2 - 3x + 1$$

## Exercice 2

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

$$D = -(x - 10) + (x + 8)$$
$$= -x + 10 + x + 8$$
$$= 18$$

## Exercice 3

$$E = -8(3x - 4)$$
$$= -8 \times 3x + (-8) \times (-4)$$
$$= -24x + 32$$

$$F = 9x(-2x + 4)$$
$$= 9x \times (-2x) + 9x \times 4$$
$$= -18x^2 + 36x$$

$$G = -2(3x - 4) - 3(x + 2)$$
$$= -2 \times 3x + (-2) \times (-4) + (-3) \times x + (-3) \times 2$$
$$= -6x + 8 - 3x - 6$$
$$= -9x + 2$$

$$H = (2x - 5)(-3 + 3x)$$
$$= 2x \times (-3) + 2x \times 3x + (-5) \times (-3) + (-5) \times 3x$$
$$= -6x + 6x^2 + 15 - 15x$$
$$= 6x^2 - 21x + 15$$

$$I = (2x - 1)^2$$
$$= (2x - 1)(2x - 1)$$
$$= 2x \times 2x + 2x \times (-1) + (-1) \times 2x + (-1) \times (-1)$$
$$= 4x^2 - 2x - 2x + 1$$
$$= 4x^2 - 4x + 1$$

$J = (-x+7)(2x-4)$

$\quad = (-x) \times 2x + (-x) \times (-4) + 7 \times 2x + 7 \times (-4)$

$\quad = -2x^2 + 4x + 14x - 28$

$\quad = -2x^2 + 18x - 28$

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

$\quad = 3x - 12x^2 + x \times 3 + x \times 4x + (-5) \times 3 + (-5) \times 4x$

$\quad = 3x - 12x^2 + 3x + 4x^2 - 15 - 20x$

$\quad = -8x^2 - 14x - 15$

Bonus $\quad L = -3x(x^2 + 2x - 1) - (x-2)^2$

$\quad = -3x \times x^2 + (-3x) \times 2x + (-3x) \times (-1) - \left[ (x-2)(x-2) \right]$

$\quad = -3x^3 - 6x^2 + 3x - \left( x \times x + x \times (-2) + (-2) \times x + (-2) \times (-2) \right)$

$\quad = -3x^3 - 6x^2 + 3x - \left( x^2 - 2x - 2x + 4 \right)$

$\quad = -3x^3 - 6x^2 + 3x - x^2 + 4x - 4$

$\quad = -3x^3 - 7x^2 + 7x - 4$