Correction des exercices

n°23 pg 40 : Développer et Réduire

a) $(x+5)(x+1) = x^2 + 5x + 1x + 5 = x^2 + 6x + 5$

b) $(2x-5)(x+4) = 2x^2 + 8x - 5x - 20 = 2x^2 + 3x - 20$

c) $(2x-3)(3x-8) = 6x^2 - 16x - 9x + 24 = 6x^2 - 25x + 24$

d) $-(1+2x)(9x+1) = -(9x + 1 + 18x^2 + 2x) = -18x^2 - 11x - 1$

e) $-(2x+5)(3x-8) = -(6x^2 - 16x + 15x - 24)$
$$= -(6x^2 - 1x - 24) = -6x^2 + x + 24$$

f) $-(3x - \frac{3}{7})(7x-14) = -(21x^2 - 42x - 3x + 6)$
$$= -21x^2 + 45x - 6$$

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n° 24 pg 40 : Développer et réduire

a) $A = 4x + (2x+1)(5x-3)$
$A = 4x + 10x^2 - 6x + 5x - 3$
$A = 10x^2 + 3x - 3$

b) $B = (x+3)(y+9) + 10x \cdot 7$
$B = xy + 9x + 3y + 27 + 10x - 7$
$B = xy + 19x + 3y + 20$

c) $C = (3x-5)(7+6x) - (7+x)$
$C = 21x + 18x^2 - 35 - 30x - 7 - x$
$C = 18x^2 - 10x - 42$

d) $D = 5x + 1 - (x+4)(x-9)$
$D = 5x + 1 - (x^2 - 9x + 4x - 36)$
$D = 5x + 1 - x^2 + 9x - 4x + 36$
$D = -x^2 + 10x + 37$

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n° 27 pg 40 : Développer et réduire

a) $A = (x+4)(x-6) + (-1+x)(x-7)$
$A = (x^2 - 6x + 4x - 24) + (-x + 7 + x^2 - 7x)$
$A = x^2 - 2x - 24 + x^2 - 8x + 7$
$A = 2x^2 - 10x - 17$

b) $B = (x-1)(5x-2) - (-6+3x)(-1+x)$
$B = 5x^2 - 2x - 5x + 2 - (6 - 6x - 3x + 3x^2)$
$B = 5x^2 - 7x + 2 - (6 - 9x + 3x^2)$
$B = 2x^2 + 2x - 4$

c) $C = -(3x-8)(x+4) - (7x-8)(-1+7x)$
$C = -(3x^2 + 12x - 8x - 32) - (-7x + 49x^2 + 8 - 56x)$
$C = -3x^2 - 4x + 32 - 49x^2 + 63x - 8$
$$C = -52x^2 + 59x + 24$$

d) $D = -(2x-5)(3-4x) + (6x-9)(-2x-1)$

$D = -(6x - 8x^2 - 15 + 20x) + (-12x^2 - 6x + 18x + 9)$

$D = 8x^2 - 26x + 15 - 12x^2 + 12x + 9$

$D = -4x^2 - 14x + 24$

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n° 32 pg 41 :   Factoriser

a) $A = (x+3)(y+9) + x+3$

$A = (x+3)(y+9+1)$

$A = (x+3)(y+10)$

b) $B = (a-5)(7+b) - (7+b)$

$B = (7+b)(a-5-1)$

$B = (7+b)(a-6)$

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

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

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

d) $D = x+5 + (x+5)(6x+3)$

$D = (x+5)(1+6x+3)$

$D = (x+5)(6x+4)$

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n° 36 pg 41 :   Factoriser

a) $A = (3x-1) - (3x-1)^2$

$A = (3x-1)[1-(3x-1)]$

$A = (3x-1)(2-3x)$

b) $B = (7x+5)^2 - (7x+5)$

$B = (7x+5)[(7x+5)-1]$

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

c) $C = (9x+7)^2 - 9x-7$

$C = (9x+7)^2 - (9x+7)$

$C = (9x+7)[(9x+7)-1]$

$C = (9x+7)(9x+6)$

d) $D = (x+5)^2 - x - 5$

$D = (x+5)^2 - (x+5)$

$D = (x+5)[(x+5)-1]$

$D = (x+5)(x+4)$

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n° 37 pg 41 :   Factoriser

a) $A = (x-5)^2 - x+5$

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

$A = (x-5)[(x-5)-1]$

$A = (x-5)(x-6)$

b) $B = (9x-4)^2 + 4 - 9x$

$B = (9x-4)^2 - (9x-4)$

$B = (9x-4)[9x-4-1]$

$B = (9x-4)(9x-5)$

c) $C = (9x-4)^2 + (4-9x)(x+7)$

$C = (9x-4)^2 - (9x-4)(x+7)$

$C = (9x-4)[(9x-4)-(x+7)]$

$C = (9x-4)(8x-11)$

d) $D = (5x-8)^2 - (8-5x)(x+2)$

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

$D = (5x-8)[(5x-8)+(x+2)]$

$D = (5x-8)(6x-6)$