Interrogation
Vendredi 12 décembre 2025

Définitions : (3 pts)

Donner les trois identités remarquables.

Exercice 1 : Développement (4 pts)

$A = 3(4x + 7) + 4(2x - 9)$
$B = 7x(2x - 5) - x(2x - 5)$
$C = (2x + 5)(3x + 7)$
$D = (2x - 5)(3x - 2)$

$A = 3(4x + 7) + 4(2x - 9)$

$A = 12x + 21 + 8x - 36$

$A = 20x - 15$

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

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

$B = 6x(2x - 5)$

$B = 12x^2 - 30x$

$C = (2x + 5)(3x + 7)$

$C = 6x^2 + 29x + 35$

$D = (2x - 5)(3x - 2)$

$D = 6x^2 - 19x + 10$

Exercice 2 : Développement (6 pts)

$H = (x + 5)^2$
$I = (4x + 6)^2$
$J = (x - 5)^2$
$K = (3x - 7)^2$
$L = (y + 3)(y - 3)$
$M = (2x + 5)(2x - 5)$

$H = x^2 + 10x + 25$

$I = 16x^2 + 48x + 36$

$J = x^2 - 10x + 25$

$K = 9x^2 - 42x + 49$

$L = y^2 - 9$

$M = 4x^2 - 25$

Exercice 3 : Compléter (5 pts)

a] $(3x + \ldots)^2 = \ldots + \ldots + 49$
b] $(5x - \ldots)^2 = \ldots - \ldots + 36$
c] $(6x + \ldots)(\ldots - \ldots) = \ldots - 64$
d] $(\ldots + \ldots)^2 = \ldots + 70x + 25$
e] $(\ldots - \ldots)^2 = 16x^2 - 72x +$

$(3x + 7)^2 = 9x^2 + 42x + 49$

$(5x + 6)^2 = 25x^2 + 60x + 36$

$(6x + 8)(6x - 8) = 36x^2 - 64$

$(7x + 5)^2 = 49x^2 + 70x + 25$

$(4x - 6)^2 = 16x^2 - 48x + 36$

Exercice 4 : Factorisation (3 pts)

$A = x^2 - 2x + 1$
$B = 4x^2 + 12x + 9$
$C = 9x^2 - 4$

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

$A = (x - 1)^2$

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

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

$C = 9x^2 - 4$

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

Exercice 5 : Factorisation 2 (3 pts)

$A = (x-3)(x-2) + 5(x-3)$ $B = 3(5-9x) - (5-9x)(1-3x)$ $C = (2x-5)(7x+5) - (2x-5)^2$

$A = (x - 3)(x - 2) + 5(x - 3)$

$A = (x - 3)\,[(x - 2) + 5$

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

$B = 3(5 - 9x) - (5 - 9x)(1 - 3x)$

$B = (5 - 9x)\,[3 - (1 - 3x)]$

$B = (5 - 9x)(2 + 3x)$

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

$C = (2x - 5)\,[(7x + 5) - (2x - 5)]$

$C = (2x - 5)(5x + 10)$

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

Exercice Bonus (2 pts)

$A = x^2 - (5x - 8)^2$ $B = -64x^2 + 9$

$A = (x - (5x - 8))(x + (5x - 8))$

$A = (x - 5x + 8)(x + 5x - 8)$

$A = (-4x + 8)(6x - 8)$

$A = -8(x - 2)(x - 2)$

$B = 9 - 64x^2$

$B = (3)^2 - (8x)^2$

$B = (3 - 8x)(3 + 8x)$