CORRIGE – M. QUET

EXERCICE 1 :

$A = 5x - xy$
$A = x \times 5 - x \times y$
$A = x(5 - y)$

$B = a^2 + 3ab$
$B = a \times a + a \times 3b$
$B = a(a + 3b)$

$C = 12a - 12ab$
$C = 12a \times 1 - 12a \times b$
$C = 12a(1 - b)$

$D = 60x^3 - 24x^5 + 36x^2$
$D = 12x^2 \times 5x - 12x^2 \times 2x^3 + 12x^2 \times 3$
$D = 12x^2(5x - 2x^3 + 3)$

$E = 7x^2 - 28x^4 + 70x^3$
$E = 7x^2 \times 1 - 7x^2 \times 4x^2 + 7x^2 \times 10x$
$E = 7x^2(1 - 4x^2 + 10x)$

$F = 3(2 + x) + (2 + x) \times y$
$F = (2 + x) \times 3 + (2 + x) \times y$
$F = (2 + x)(3 + y)$

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

$H = (5x + 2y)(5 + x) + 2(5x + 2y)$
$H = (5x + 2y)[(5 + x) + 2]$
$H = (5x + 2y)[5 + x + 2]$
$H = (5x + 2y)(x + 7)$

EXERCICE 2 :

$B = 78x^2 + 54x^7 + 42x^5$
$B = 6x^2 \times 13 + 6x^2 \times 9x^5 + 6x^2 \times 7x^3$
$B = 6x^2(13 + 9x^5 + 7x^3)$

$C = 42x^5y^3 - 30x^2y^7 - 18x^4y^4$
$C = 6x^2y^3 \times 7x^3 - 6x^2y^3 \times 5y^4 - 6x^2y^3 \times 3x^2y$
$C = 6x^2y^3(7x^3 - 5y^4 - 3x^2y)$

$D = 45x^4y^7z^2 - 30x^3y^4z + 15x^3y^3$
$D = 15x^3y^3 \times 3xy^4z^2 - 15x^3y^3 \times 2yz + 15x^3y^3 \times 1$
$D = 15x^3y^3(3xy^4z^2 - 2yz + 1)$

$E = (3 - 2x)(5 - x) - (3 - 2x)(7 - 4x)$
$E = (3 - 2x)[(5 - x) - (7 - 4x)]$
$E = (3 - 2x)[5 - x - 7 + 4x]$
$E = (3 - 2x)(3x - 2)$

$F = (7 - 4x)(x + 4) - (x + 4)(7 + 3x)$
$F = (x + 4)[(7 - 4x) - (7 + 3x)]$
$F = (x + 4)[7 - 4x - 7 - 3x]$
$F = (x + 4)(-7x)$

$G = (5 + 2x)(5 - x) - (5 + 2x)$
$G = (5 + 2x)(5 - x) - (5 + 2x) \times 1$
$G = (5 + 2x)[(5 - x) - 1]$
$G = (5 + 2x)[5 - x - 1]$
$G = (5 + 2x)(4 - x)$

$H = (7 - 9x)(1 + x) - 3(7 - 9x)$
$H = (7 - 9x)[(1 + x) - 3]$
$H = (7 - 9x)[1 + x - 3]$
$H = (7 - 9x)(x - 2)$

$I = (2 + x)^2 + 3(2 + x)$
$I = (2 + x)(2 + x) + 3(2 + x)$
$I = (2 + x)[(2 + x) + 3]$
$I = (2 + x)[2 + x + 3]$
$I = (2 + x)(x + 5)$