

Exercice à faire en autonomie et à me rendre pour correction au fur et à mesure.
Ne pas attendre la veille du DS !!!

Exercice 1 : Développer les expressions suivantes

$$\begin{array}{lll}
 A = 2(3x - 7)(4x + 8) - (2x - 1)(5x + 6) & B = 7(x + 1)^2 - 4(2x + 3)^2 & C = 5 \left(2x - \frac{5}{2} \right)^2 - 7 \\
 D = (4x - \sqrt{7})(x - \sqrt{7}) + (x - 1)^2 & E = (x - 1)^2(x + 3) & F = 3(x - 2)^3 \\
 G = \left(\frac{5}{2}x + \frac{8}{3} \right) \left(3x - \frac{1}{2} \right) & H = (x - 7)(x^2 + 3x - 1) & I = -\frac{3}{7}(2x - 5)^2 \\
 J = 3x(5x - 2) - (x - 7)(3x - 1) + x & K = (3x - 1)(2x^4 - 15x^2 + 7) & L = (2x^2 + x - 3)(x^2 + 5) - (x^2 - 7)(x + 1) \\
 M = \sqrt{3}x(5x - \sqrt{2}) - (x - \sqrt{2}) & N = (x - 2\sqrt{2})^2 - (11x)^2 & O = (3x - 1)^4 \\
 P = (x - 3 - \sqrt{19})(x + 3 - \sqrt{19}) & Q = (4\sqrt{5}x - 2)(4\sqrt{5} + 2) & R = (x - \sqrt{3})(\sqrt{3} - x)
 \end{array}$$

Exercice 2 : Factoriser les expressions suivantes

$$\begin{array}{lll}
 A = 4x^2y^3 - 5xy^2 + 7x^5y & B = -3x^4y^6z^2 + 6x^2yz^2 & C = 25x^3y^3 - 15x^2y^6 + 30x^3y^7 \\
 D = 4(x - 1)(2x + 3) - (x - 1)(3x + 2) & E = (2x + 8)^2 - 3(x + 4)(2x - 1) & F = 2(6x + 3)^2 + 2x + 1 \\
 G = (5x - 7)(2x + 6) + (x + 3)(3x - 9) & H = (4x - 7)^2 - (7 - 4x)(2x + 5) & I = (8x + 4)(2x - 1) + (1 - 2x)(5x + 5) \\
 J = \left(\frac{3}{2}x - 1 \right)^2 - 3(2 - 3x)(x + 1) & K = (3x - \sqrt{2})^2 + \left(2 - \frac{6}{\sqrt{2}}x \right) &
 \end{array}$$

Exercice 3 : Factoriser les expressions suivantes

$$\begin{array}{lll}
 A = 4x^2 - 12x + 9 + (2x - 3)(4x + 5) & B = 36x^2 - 49 - (7 - 6x)(5x - 1) & C = 2x^2 - 3 + \sqrt{2}x - \sqrt{3} \\
 D = \frac{x^2}{4} + 5x + 25 & E = 3x^2 + 2\sqrt{6}x + 2 & F = 0,01x^2 - 0,25 + (5 - x)(2x + 1) \\
 G = (x - 2)^2 - 4 & H = 4(2x - 3)^2 - 16 & I = 49 - 25(2x + 3)^2 \\
 J = \frac{16}{9} - \left(\frac{3}{2}x + 1 \right)^2 & K = 16(2x + 3)^2 - 121 & L = \left(\frac{p+1}{2} \right)^2 - \left(\frac{p-1}{2} \right)^2 \\
 M = (2x + 6)^2 - (3x - 9)^2 & N = 4(6x + 7)^2 - 16(2x - 7)^2 & O = 2(x + 1)^2 - 5(x + 2)^2
 \end{array}$$

Exercice 4 : Factoriser les expressions suivantes

$$\begin{array}{ll}
 A = (2x + 3)^2 - (x + 1)^2 + (x + 2)(3x - 1) & B = 4(x + 1)^2 - 9 + (1 - 2x)(2x + 5) \\
 C = 4x^2 + 28x + 49 - (6x + 21)(4x - 1) & D = 9(3x - 1)^2 - 49 + (5 - 4,5x)(4,5x + 3) \\
 E = (2x - 1)^2 + (3 - 6x)(x + 5) - 2x(4 - 8x) & F = (x + 1)^2 - (x - 1)^2 - 5x^2 + 3x(5x - 9)
 \end{array}$$