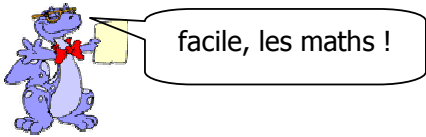


**Exercice 1 :**

|                                                                                                                                                    |                                                                                                                                                     |
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| $A = x^2 + 3x^2 + 2x + 7x + 9x + 3 + 9$<br>$\boxed{A = 4x^2 + 18x + 12}$                                                                           | $B = 4x^2 - 9x^2 + 2x - 7x + 9x - 13 - 1$<br>$\boxed{B = -5x^2 + 4x - 14}$                                                                          |
| $C = 2x^3 + 5x^2 - 3x + 2x^2 - 15x + 9 + 7x^3 - 19$<br>$C = 2x^3 + 7x^3 + 5x^2 + 2x^2 - 15x - 3x + 9 - 19$<br>$\boxed{C = 9x^3 + 7x^2 - 18x - 10}$ | $D = 8x^3 - x^2 - 3x^2 + 21x - 15x^3 - 4 + 7x - 27$<br>$D = 8x^3 - 15x^3 - x^2 - 3x^2 + 21x + 7x - 27 - 4$<br>$\boxed{D = -7x^3 - 4x^2 + 28x - 31}$ |
| $E = 5x^2 - 16x^3 + 3x^2 - 7x - 15 + 3x - 9x + 11$<br>$E = -16x^3 + 5x^2 + 3x^2 - 7x + 3x - 9x + 11 - 15$<br>$\boxed{E = -16x^3 + 8x^2 - 13x - 4}$ |                                                                   |

**Exercice 2 :**

|                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Si <math>x = 2</math></b><br>$A = x^2 + 5x + 9$<br>$A = 2^2 + 5 \times 2 + 9$<br>$A = 4 + 10 + 9$<br>$\boxed{A = 23}$<br><br><b>Si <math>x = -7</math></b><br>$A = x^2 + 5x + 9$<br>$A = (-7)^2 + 5 \times (-7) + 9$<br>$A = 49 - 35 + 9$<br>$\boxed{A = 23}$                                                                                                                                                         | <b>3. Si <math>x = 0</math></b><br>$C = (5x - 7)(3x + 2) - (x + 2)(x - 9)$<br>$C = (5 \times 0 - 7)(3 \times 0 + 2) - (0 + 2)(0 - 9)$<br>$C = (-7) \times 2 - 2 \times (-9)$<br>$C = -14 + 18$<br>$\boxed{C = 4}$<br><br><b>Si <math>x = -3</math></b><br>$C = (5x - 7)(3x + 2) - (x + 2)(x - 9)$<br>$C = (5 \times (-3) - 7)(3 \times (-3) + 2) - (-3 + 2)(-3 - 9)$<br>$C = (-15 - 7)(-9 + 2) - (-3 + 2)(-3 - 9)$<br>$C = -22 \times (-7) - (-1) \times (-12)$<br>$C = 154 - 12$<br>$\boxed{C = 142}$                                                                               |
| <b>2. Si <math>x = -1</math></b><br>$B = 4(x + 7) - 8(x^2 - 2)$<br>$B = 4 \times (-1 + 7) - 8 \times ((-1)^2 - 2)$<br>$B = 4 \times 6 - 8 \times (1 - 2)$<br>$B = 4 \times 6 - 8 \times (-1)$<br>$B = 24 + 8$<br>$\boxed{B = 32}$<br><br><b>Si <math>x = 3</math></b><br>$B = 4(x + 7) - 8(x^2 - 2)$<br>$B = 4 \times (3 + 7) - 8 \times (3^2 - 2)$<br>$B = 4 \times 10 - 8 \times 7$<br>$B = 40 - 56$<br>$\boxed{B = -16}$ | <b>4. <math>D = 2x^3 - 3x + 2x^2 - 15x + 9 - 7x^3</math></b><br>$D = 2x^3 - 7x^3 + 2x^2 - 15x - 3x + 9$<br>$D = -5x^3 + 2x^2 - 18x + 9$<br><br><b>Si <math>x = -2</math></b><br>$D = -5 \times (-2)^3 + 2 \times (-2)^2 - 18 \times (-2) + 9$<br>$D = -5 \times (-8) + 2 \times 4 - (-36) + 9$<br>$D = 40 + 8 + 36 + 9$<br>$\boxed{D = 93}$<br><br><b>Si <math>x = 5</math></b><br>$D = -5 \times 5^3 + 2 \times 5^2 - 18 \times 5 + 9$<br>$D = -5 \times 125 + 2 \times 25 - 90 + 9$<br>$D = -625 + 50 - 90 + 9$<br>$D = 50 + 9 - 625 - 90$<br>$D = 59 - 715$<br>$\boxed{D = -656}$ |

**Exercise 3 :**

|                                                                                                                                              |                                                                                                                                                     |                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| $A = 5(x + 3)$<br>$A = 5 \times x + 5 \times 3$<br><b><math>A = 5x + 15</math></b>                                                           | $B = 2(x - 8)$<br>$B = 2 \times x - 2 \times 8$<br><b><math>B = 2x - 16</math></b>                                                                  | $C = 4(3x + 2)$<br>$C = 4 \times 3x + 4 \times 2$<br><b><math>C = 12x + 8</math></b>                                                                     |
| $D = 7(4x - 3)$<br>$D = 7 \times 4x - 7 \times 3$<br><b><math>D = 28x - 21</math></b>                                                        | $E = 5(x - 1) + 2(x + 4)$<br>$E = 5x - 5 + 2x + 8$<br>$E = 5x + 2x + 8 - 5$<br><b><math>E = 7x + 3</math></b>                                       | $F = 8(x + 2) - 6(x - 9)$<br>$F = 8x + 16 - (6x - 54)$<br>$F = 8x + 16 - 6x + 54$<br>$F = 8x - 6x + 16 + 54$<br><b><math>F = 2x + 70</math></b>          |
| $G = 3(x - 5) - 4(x + 2)$<br>$G = 3x - 15 - (4x + 8)$<br>$G = 3x - 15 - 4x - 8$<br>$G = 3x - 4x - 15 - 8$<br><b><math>G = -x - 23</math></b> | $H = -5(x - 2) + 2(x + 7)$<br>$H = -(5x - 10) + 2x + 14$<br>$H = -5x + 10 + 2x + 14$<br>$H = 2x - 5x + 10 + 14$<br><b><math>H = -3x + 24</math></b> | $I = -4(7 - 2x) - 9(3x - 1)$<br>$I = -(28 - 8x) - (27x - 9)$<br>$I = -28 + 8x - 27x + 9$<br>$I = 8x - 27x + 9 - 28$<br><b><math>I = -19x - 19</math></b> |

**Exercise 4 :**

|                                                                                                   |                                                                                                    |                                                                                                  |
|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| $A = (x + 5)(x + 3)$<br>$A = x^2 + 3x + 5x + 15$<br><b><math>A = x^2 + 8x + 15</math></b>         | $B = (x + 9)(x + 8)$<br>$B = x^2 + 8x + 9x + 72$<br><b><math>B = x^2 + 17x + 72</math></b>         | $C = (2x + 10)(3x + 2)$<br>$C = 6x^2 + 4x + 30x + 20$<br><b><math>C = 6x^2 + 34x + 20</math></b> |
| $D = (5x + 2)(4x + 3)$<br>$D = 20x^2 + 15x + 8x + 6$<br><b><math>D = 20x^2 + 23x + 6</math></b>   | $E = (x - 1)(x + 4)$<br>$E = x^2 + 4x - x - 4$<br><b><math>E = x^2 + 3x - 4</math></b>             | $F = (x + 2)(x - 9)$<br>$F = x^2 - 9x + 2x - 18$<br><b><math>F = x^2 - 7x - 18</math></b>        |
| $G = (3x + 4)(8x - 1)$<br>$G = 24x^2 - 3x + 32x - 4$<br><b><math>G = 24x^2 + 29x - 4</math></b>   | $H = (5x - 7)(3x + 2)$<br>$H = 15x^2 + 10x - 21x - 14$<br><b><math>H = 15x^2 - 11x - 14</math></b> | $I = (4x - 5)(5x - 1)$<br>$I = 20x^2 - 4x - 25x + 5$<br><b><math>I = 20x^2 - 29x + 5</math></b>  |
| $J = (2x - 9)(8x - 4)$<br>$J = 16x^2 - 8x - 72x + 36$<br><b><math>J = 16x^2 - 80x + 36</math></b> | $K = (5 - 4x)(2 - 2x)$<br>$K = 10 - 10x - 8x + 8x^2$<br><b><math>K = 8x^2 - 18x + 10</math></b>    | $L = (5 - x)(x + 7)$<br>$L = 5x + 35 - x^2 - 7x$<br><b><math>L = -x^2 - 2x + 35</math></b>       |
| $M = (9 - 2x)(2x + 1)$<br>$M = 18x + 9 - 4x^2 - 2x$<br><b><math>M = -4x^2 + 16x + 9</math></b>    | $N = (7 + 5x)(3 - 2x)$<br>$N = 21 - 14x + 15x - 10x^2$<br><b><math>N = -10x^2 + x + 21</math></b>  | $P = (2x - 7)(2x + 7)$<br>$P = 4x^2 + 14x - 14x - 49$<br><b><math>P = 4x^2 - 49</math></b>       |

**Exercise 5 :**

|                                                                                                                                                                                                                               |                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $A = (x + 1)(x + 3) + (x + 5)(x + 6)$ $A = x^2 + 3x + x + 3 + x^2 + 6x + 5x + 30$ $A = x^2 + x^2 + 3x + x + 6x + 5x + 3 + 30$ $\boxed{A = 2x^2 + 15x + 33}$                                                                   | $B = (x - 2)(x - 7) + (x - 1)(x - 4)$ $B = x^2 - 7x - 2x + 14 + x^2 - 4x - x + 4$ $B = x^2 + x^2 - 7x - 2x - 4x - x + 4 + 14$ $\boxed{B = 2x^2 - 14x + 18}$                                                               |
| $C = (2x + 4)(5x + 2) + (3x - 1)(2x - 3)$ $C = 10x^2 + 4x + 20x + 8 + 6x^2 - 9x - 2x + 3$ $C = 10x^2 + 6x^2 + 4x + 20x - 9x - 2x + 8 + 3$ $\boxed{C = 16x^2 + 13x + 11}$                                                      | $D = (x + 3)(5x - 4) - (2x + 3)(5x - 1)$ $D = 5x^2 - 4x + 15x - 12 - (10x^2 - 2x + 15x - 3)$ $D = 5x^2 - 4x + 15x - 12 - 10x^2 + 2x - 15x + 3$ $D = 5x^2 - 10x^2 - 4x + 2x - 12 + 3$ $\boxed{D = -5x^2 - 2x - 9}$         |
| $E = (4x - 1)(4x - 5) - (2x - 3)(7x + 1)$ $E = 16x^2 - 20x - 4x + 5 - (14x^2 + 2x - 21x - 3)$ $E = 16x^2 - 20x - 4x + 5 - 14x^2 - 2x + 21x + 3$ $E = 16x^2 - 14x^2 - 20x - 4x - 2x + 21x + 5 + 3$ $\boxed{E = 2x^2 - 5x + 8}$ | $F = (5 - 2x)(2x - 3) - (x - 6)(-5x + 1)$ $F = 10x - 15 - 4x^2 + 6x - (-5x^2 + x + 30x - 6)$ $F = 10x - 15 - 4x^2 + 6x + 5x^2 - x - 30x + 6$ $F = -4x^2 + 5x^2 + 10x + 6x - x - 30x - 15 + 6$ $\boxed{F = x^2 - 15x - 9}$ |

