

EXERCICE 1

Réduire les expressions suivantes :

$$A = 2x^2 + 3x + 5 - x^2 + 2x - 4$$

$$A = 2x^2 - x^2 + 3x + 2x + 5 - 4$$

$$A = x^2 \times (2-1) + x \times (3+2) + 5 - 4$$

$$A = x^2 + 5x + 1$$

$$B = 6x^2 - 5x + 9 - 7x^2 + 3x - 3$$

$$C = 6x - 5x^2 + 7 - x^2 + 3x - 12$$

$$D = 5 + 6x - 3 + 7x^2 - x - 9 + x^2 - 12x^2 - 4x - 10$$

$$E = x^3 + 6 - 8x + x^2 - 3x^3 - 5 + 3x^2 - 3x - 2x^2$$

$$F = -4x + x^2 - 6 + 5x^2 + 3x - 10 - 8x^2 + 2x$$

$$G = \frac{1}{2}x + \frac{3}{4}x^2 - \frac{1}{3} + \frac{5}{2}x - \frac{3}{2}x^2 + \frac{7}{4}x$$

EXERCICE 2

Réduire les expressions suivantes :

$$A = (x+3) - (x+5) - (x-7) \rightarrow \text{Règle des signes}$$

$$A = x + 3 - x - 5 - x + 7$$

$$A = x - x - x + 3 - 5 + 7$$

$$A = -x + 5$$

$$B = -(x^2 - x) - (x - 1) - (1 - x^2)$$

$$C = x^2 - (3x^2 - 5x^2) + (x^2 - 8x^2) - 2x^2$$

$$D = -4x + x^2 - (6 + 5x^2) + 3x - (10 - 8x^2) + 2x$$

$$E = -(4 + 3x - 2x^2) - (4x - x^2) - (x^2 - x)$$

$$F = 2x^3 + 4 - (-6x^2 + x) - (-2x + 9x^3) - (3x^2 - 9x)$$

$$G = \frac{1}{4}x^2 - \left(\frac{3}{2}x + \frac{1}{2}x^2\right) - \left(\frac{4}{5} - \frac{5}{4}x\right)$$

La Providence - Montpellier

CORRIGE - M. QUET

EXERCICE 1

Réduire les expressions suivantes :

$A = 2x^2 + 3x + 5 - x^2 + 2x - 4$ $A = 2x^2 - x^2 + 3x + 2x + 5 - 4$ $A = x^2 \times (2-1) + x \times (3+2) + 5 - 4$ $A = x^2 + 5x + 1$
$B = 6x^2 - 5x + 9 - 7x^2 + 3x - 3$ $B = 6x^2 - 7x^2 - 5x + 3x + 9 - 3$ $B = -x^2 - 2x + 6$
$C = 6x - 5x^2 + 7 - x^2 + 3x - 12$ $C = -5x^2 - x^2 + 6x + 3x + 7 - 12$ $C = -6x^2 + 9x - 5$
$D = 5 + 6x - 3 + 7x^2 - x - 9 + x^2 - 12x^2 - 4x - 10$ $D = +7x^2 + x^2 - 12x^2 + 6x - x - 4x + 5 - 3 - 9 - 10$ $D = x^2(7+1-12) + x(6-1-4) + 5 - 22$ $D = -4x^2 + x - 17$
$E = x^3 + 6 - 8x + x^2 - 3x^3 - 5 + 3x^2 - 3x - 2x^2$ $E = x^3 - 3x^3 + x^2 + 3x^2 - 2x^2 - 8x - 3x + 6 - 5$ $E = x^3(1-3) + x^2(1+3-2) + x(-8-3) + 6 - 5$ $E = -2x^3 + 2x^2 - 11x + 1$
$F = -4x + x^2 - 6 + 5x^2 + 3x - 10 - 8x^2 + 2x$ $F = +x^2 + 5x^2 - 8x^2 - 4x + 3x + 2x - 6 - 10$ $F = x^2(1+5-8) + x(-4+3+2) - 6 - 10$ $F = -2x^2 + x - 16$
$G = \frac{1}{2}x + \frac{3}{4}x^2 - \frac{1}{3} + \frac{5}{2}x - \frac{3}{2}x^2 + \frac{7}{4}x$ $G = +\frac{3}{4}x^2 - \frac{3}{2}x^2 + \frac{1}{2}x + \frac{5}{2}x + \frac{7}{4}x - \frac{1}{3}$ $G = x^2\left(\frac{3}{4} - \frac{3}{2}\right) + x\left(\frac{1}{2} + \frac{5}{2} + \frac{7}{4}\right) - \frac{1}{3}$ $G = x^2\left(\frac{3}{4} - \frac{6}{4}\right) + x\left(\frac{2}{4} + \frac{10}{4} + \frac{7}{4}\right) - \frac{1}{3}$ $G = -\frac{3}{4}x^2 + \frac{19}{4}x - \frac{1}{3}$

EXERCICE 2

Réduire les expressions suivantes :

$A = (x+3) - (x+5) - (x-7) \rightarrow$ Règle des signes $A = x + 3 - x - 5 - x + 7$ $A = x - x - x + 3 - 5 + 7$ $A = -x + 5$
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$B = -(x^2 - x) - (x-1) - (1-x^2)$ $B = -x^2 + x - x + 1 - 1 + x^2$ $B = -x^2 + x^2 + x - x + 1 - 1$ $B = 0$
$C = x^2 - (3x^2 - 5x^2) + (x^2 - 8x^2) - 2x^2$ $C = x^2 - (-2x^2) + (-7x^2) - 2x^2$ $C = x^2 + 2x^2 - 7x^2 - 2x^2$ $C = x^2(1+2-7-2)$ $C = -6x^2$
$D = -4x + x^2 - (6+5x^2) + 3x - (10-8x^2) + 2x$ $D = -4x + x^2 - 6 - 5x^2 + 3x - 10 + 8x^2 + 2x$ $D = +x^2 - 5x^2 + 8x^2 - 4x + 3x + 2x - 6 - 10$ $D = x^2(1-5+8) + x(-4+3+2) - 6 - 10$ $D = 4x^2 + x - 16$
$E = -(4+3x-2x^2) - (4x-x^2) - (x^2-x)$ $E = -4 - 3x + 2x^2 - 4x + x^2 - x^2 + x$ $E = +2x^2 + x^2 - x^2 - 3x - 4x + x - 4$ $E = x^2(2+1-1) + x(-3-4+1) - 4$ $E = 2x^2 - 6x - 4$
$F = 2x^3 + 4 - (-6x^2 + x) - (-2x + 9x^3) - (3x^2 - 9x)$ $F = 2x^3 + 4 + 6x^2 - x + 2x - 9x^3 - 3x^2 + 9x$ $F = 2x^3 - 9x^3 + 6x^2 - 3x^2 - x + 2x + 9x + 4$ $F = x^3(2-9) + x^2(6-3) + x(-1+2+9) + 4$ $F = -7x^3 + 3x^2 + 10x + 4$
$G = \frac{1}{4}x^2 - \left(\frac{3}{2}x + \frac{1}{2}x^2\right) - \left(\frac{4}{5} - \frac{5}{4}x\right)$ $G = \frac{1}{4}x^2 - \frac{3}{2}x - \frac{1}{2}x^2 - \frac{4}{5} + \frac{5}{4}x$ $G = \frac{1}{4}x^2 - \frac{1}{2}x^2 - \frac{3}{2}x + \frac{5}{4}x - \frac{4}{5}$ $G = x^2\left(\frac{1}{4} - \frac{1}{2}\right) + x\left(-\frac{3}{2} + \frac{5}{4}\right) - \frac{4}{5}$ $G = x^2\left(\frac{1}{4} - \frac{2}{4}\right) + x\left(-\frac{6}{4} + \frac{5}{4}\right) - \frac{4}{5}$ $G = -\frac{1}{4}x^2 - \frac{1}{4}x - \frac{4}{5}$