

Corrections Savoir Ta. 1

Corrigé Exercice 1

$$\begin{aligned} A &= (2x - 3)(1 - 5x) \\ A &= 2x - 10x^2 - 3 - 15x \\ A &= -10x^2 - 13x - 3 \end{aligned}$$

$$\begin{aligned} D &= (x - 2)(2x^2 - 3x - 1) \\ D &= 2x^3 - 3x^2 - x - 4x^2 + 6x + 2 \\ D &= 2x^3 - 7x^2 + 5x + 2 \end{aligned}$$

$$\begin{aligned} B &= (4 - x)(2 - 7x) \\ B &= 8 - 28x - 2x + 7x^2 \\ B &= 7x^2 - 30x + 8 \end{aligned}$$

$$\begin{aligned} E &= 2(3 + 5x)(4 - 2x) \\ E &= 2(12 - 6x + 20x - 10x^2) \\ E &= 2(-10x^2 + 14x + 12) \\ E &= -20x^2 + 28x + 24 \end{aligned}$$

$$\begin{aligned} C &= (3n - 1)(n^2 + 4) \\ C &= 3n^3 + 12n - n^2 - 4 \\ C &= 3n^3 - n^2 + 12n - 4 \end{aligned}$$

$$\begin{aligned} F &= (x + 1)(x - 2)(3 - x) \\ F &= (x^2 - 2x + x - 2)(3 - x) \\ F &= (x^2 - x - 2)(3 - x) \\ F &= 3x^2 - x^3 - 3x + x^2 - 6 + 2x \\ F &= -x^3 + 4x^2 - x - 6 \end{aligned}$$

$$\begin{aligned} G &= (2 - 7y)(3y + 1) \\ G &= 6y + 2 - 21y^2 - 7y \\ G &= -21y^2 - y + 2 \end{aligned}$$

$$\begin{aligned} I &= (a + 3)(2a^2 + 5a) \\ I &= 2a^3 + 5a^2 + 6a^2 + 15a \\ I &= 2a^3 + 11a^2 + 15a \end{aligned}$$

$$\begin{aligned} H &= (-x - 5)(2x + 3) \\ H &= -2x^2 - 3x - 10x - 15 \\ H &= -2x^2 - 13x - 15 \end{aligned}$$

$$\begin{aligned} J &= (2u - w)(3w - 1) \\ J &= 2uw - 2u - 3w^2 - w \end{aligned}$$

$$\begin{aligned} K &= -3(2 - x)(-x^2 + 3x - 2) \\ K &= -3(-2x^2 + 6x - 4 + x^3 - 3x^2 + 2x) \\ K &= -3(x^3 - 5x^2 + 8x - 4) \\ K &= -3x^3 + 15x^2 - 24x + 12 \end{aligned}$$

Corrigé Exercice 2

$$\begin{aligned} L &= (3x + 5)^2 \\ L &= 9x^2 + 30x + 25 \end{aligned}$$

$$\begin{aligned} N &= (2 - 3x)(2 + 3x) \\ N &= -9x^2 + 4 \end{aligned}$$

$$\begin{aligned} Q &= (-1 - 3x)^2 \\ Q &= 9x^2 + 6x + 1 \end{aligned}$$

$$\begin{aligned} M &= (2 - 4a)^2 \\ M &= 16a^2 - 16a + 4 \end{aligned}$$

$$\begin{aligned} P &= (x^2 - 6)^2 \\ P &= x^4 - 12x^2 + 36 \end{aligned}$$

$$\begin{aligned} R &= (-3 + 7x)(3 + 7x) \\ R &= 49x^2 - 9 \end{aligned}$$

$$\begin{aligned} S &= (4 - x)^2 \\ S &= x^2 - 8x + 16 \end{aligned}$$

$$\begin{aligned} U &= (2n - 1)(2n + 1) \\ U &= 4n^2 - 1 \end{aligned}$$

$$\begin{aligned} W &= (-3x - 3)^2 \\ W &= 9x^2 + 18x + 9 \end{aligned}$$

$$\begin{aligned} T &= (8 + 3y)^2 \\ T &= 9y^2 + 48y + 64 \end{aligned}$$

$$\begin{aligned} V &= (-2x + 6)^2 \\ V &= 4x^2 - 24x + 36 \end{aligned}$$

$$\begin{aligned} X &= (5 - 2a)(-5 - 2a) \\ X &= 4a^2 - 25 \end{aligned}$$

Corrigé Exercice 3

$$\begin{aligned} A &= (2x - 1)^2 + (4 + 3x)(3 - 4x) \\ A &= 4x^2 - 4x + 1 + 12 - 16x + 9x - 12x^2 \\ A &= -8x^2 - 11x + 13 \end{aligned}$$

$$\begin{aligned} B &= (1 - x)(2 + 2x) - (2x + 3)(5 + x) \\ B &= 2 + 2x - 2x - 2x^2 - (10x + 2x^2 + 15 + 3x) \\ B &= -2x^2 + 2 - 10x - 2x^2 - 15 - 3x \\ B &= -4x^2 - 13x - 13 \end{aligned}$$

$$\begin{aligned} C &= 3t(1 - 2t) - 2(t^2 - 4t - 3) \\ C &= 3t - 6t^2 - 2t^2 + 8t + 6 \\ C &= -8t^2 + 11t + 6 \end{aligned}$$

$$\begin{aligned} D &= 4x^2 - (2x - 9)(2x + 9) \\ D &= 4x^2 - (4x^2 - 81) \\ D &= 4x^2 - 4x^2 + 81 \\ D &= 81 \end{aligned}$$

$$\begin{aligned} E &= (n - 2)(n - 3) - (3n^2 + 6n - 1) \\ E &= n^2 - 2n - 3n + 6 - 3n^2 - 6n + 1 \\ E &= -2n^2 - 11n + 7 \end{aligned}$$

$$\begin{aligned} F &= (4x - 5)^2 + 3(x + 2)^2 \\ F &= 16x^2 - 40x + 25 + 3(x^2 + 4x + 4) \\ F &= 16x^2 - 40x + 25 + 3x^2 + 12x + 12 \\ F &= 19x^2 - 28x + 37 \end{aligned}$$

$$\begin{aligned} G &= x(1 - 2x - 2x^2) + (2 - 3x)(x^2 - 4) \\ G &= x - 2x^2 - 2x^3 + 2x^2 - 8 - 3x^3 + 12x \\ G &= -5x^3 + 13x - 8 \end{aligned}$$

$$\begin{aligned} H &= (x - 5)(2x + 4) - 2(1 - x)^2 \\ H &= 2x^2 + 4x - 10x - 20 - 2(1 - 2x + x^2) \\ H &= 2x^2 - 6x - 20 - 2 + 4x - 2x^2 \\ H &= -2x - 22 \end{aligned}$$

Corrigé Exercice 4

$$I = \left(2x - \frac{3}{2}\right)^2$$

$$I = 4x^2 - \frac{12x}{2} + \frac{9}{4}$$

$$I = 4x^2 - 6x + \frac{9}{4}$$

$$L = (\sqrt{x} + 3)^2$$

$$L = x + 6\sqrt{x} + 9$$

$$M = (x - 4)^3$$

$$M = (x^2 - 8x + 16)(x - 4)$$

$$M = x^3 - 4x^2 - 8x^2 + 32x + 16x - 64$$

$$M = x^3 - 12x^2 + 48x - 64$$

$$J = \left(\frac{x}{2} + 1\right)(4 - 6x)$$

$$J = \frac{4x}{2} - \frac{6x^2}{2} + 4 - 6x$$

$$J = 2x - 3x^2 + 4 - 6x$$

$$J = -3x^2 - 4x + 4$$

$$N = (3a - 2b)(a^2 + 3ab - b^2)$$

$$N = 3a^3 + 9a^2b - 3ab^2 - 2a^2b - 6ab^2 + 2b^3$$

$$N = 3a^3 + 7a^2b - 9ab^2 + 2b^3$$

$$K = \left(\frac{n}{2} - \frac{1}{5}\right)\left(\frac{n}{3} + \frac{1}{2}\right)$$

$$K = \frac{n^2}{6} + \frac{n}{4} - \frac{n}{15} - \frac{1}{10}$$

$$K = \frac{1}{6}n^2 + \left(\frac{1}{4} - \frac{1}{15}\right)n - \frac{1}{10}$$

$$K = \frac{1}{6}n^2 + \left(\frac{15-4}{60}\right)n - \frac{1}{10}$$

$$K = \frac{1}{6}n^2 + \frac{11}{60}n - \frac{1}{10}$$

$$P = \left(\frac{2x}{3} - 6\right)\left(\frac{x}{4} + 3\right)$$

$$P = \frac{2x^2}{12} + \frac{6x}{3} - \frac{6x}{4} - 18$$

$$P = \frac{x^2}{6} + 2x - \frac{3}{2}x - 18$$

$$P = \frac{x^2}{6} + \frac{4x}{2} - \frac{3}{2}x - 18$$

$$P = \frac{x^2}{6} + \frac{x}{2} - 18$$

$$Q = \left(\frac{1}{4} + 4x\right)^2$$

$$Q = \frac{1}{16} + \frac{8x}{4} + 16x^2$$

$$Q = 16x^2 + 2x + \frac{1}{16}$$

$$T = (-2a^2 + 3a - 1)(-2a^2 + 3a - 1)$$

$$T = 4a^4 - 6a^3 + 2a^2 - 6a^3 + 9a^2 - 3a$$

$$T = 4a^4 - 12a^3 + 13a^2 - 6a + 1$$

$$R = (2x - \sqrt{3})^2$$

$$R = 4x^2 - 4\sqrt{3}x + 9$$

$$S = (2x - 3\pi)^2$$

$$S = 4x^2 - 6\pi x + 9\pi^2$$

$$U = \left(1 + \frac{1}{x}\right)(x - 1)$$

$$U = x - 1 + \frac{x}{x} - \frac{1}{x}$$

$$U = x - 1 + 1 - \frac{1}{x} = x - \frac{1}{x}$$