

Corrigés Savoir N. 2

Corrigé Exercice 6

1)	$3 + x$	$x - 10$	$-5 + x$	$-4 - x$	$6 - x$	$3 - x - 1$	$-7 - x + 4$
$x = 4$	$3 + 4 = 7$	$4 - 10 = -6$	$-5 + 4 = -1$	$-4 - 4 = -8$	$6 - 4 = 2$	$3 - 4 - 1 = -2$	$-7 - 4 + 4 = -7$
$x = -3$	$3 + x =$ $3 + (-3) =$ $3 - 3 = 0$	$x - 10 =$ $-3 - 10 =$ -13	$-5 + x =$ $-5 + (-3) =$ $-5 - 3 = -8$	$-4 - x =$ $-4 - (-3) =$ $-4 + 3 = -1$	$6 - x =$ $6 - (-3) =$ $6 + 3 = 9$	$3 - x - 1 =$ $3 - (-3) - 1 =$ $3 + 3 - 1 = 5$	$-7 - x + 4 =$ $-7 - (-3) + 4 =$ $-7 + 3 + 4 = 0$

2)	$5 \times x$	$-2 \times x$	$6x$	$-3x$	$x \div (-2)$	$\frac{x}{4}$	x^2
$x = 8$	$5 \times 8 = 40$	$-2 \times 8 = -16$	$6x = 6 \times x =$ $6 \times 8 = 48$	$-3x = -3 \times x =$ $-3 \times 8 = -24$	$8 \div (-2) = -4$	$\frac{8}{4} = 2$	$8^2 = 64$
$x = -4$	$5 \times (-4) = -20$	$-2 \times (-4) = +8$	$6 \times (-4) = -24$	$-3 \times (-4) = +12$	$-4 \div (-2) = +2$	$\frac{-4}{4} = -1$	$(-4)^2 = +16$

Corrigé Exercice 7

a) $A = 3x + 2$ et $x = 5$ $A = 3 \times 5 + 2$ $A = 15 + 2 = 17$	b) $B = 2x - 5$ et $x = -3$ $B = 2 \times (-3) - 5$ $B = -6 - 5 = -11$	c) $C = 4 - 6x$ et $x = 2$ $C = 4 - 6 \times 2$ $C = 4 - 12 = -8$	d) $D = -7 + 2x$ et $x = -6$ $D = -7 + 2 \times (-6)$ $D = -7 - 12 = -19$
e) $E = 3 \times (2 - x)$ et $x = -5$ $E = 3 \times (2 - (-5))$ $E = 3 \times (2 + 5)$ $E = 3 \times 7 = 21$	f) $F = (x + 4)(x - 10)$ et $x = -1$ $F = (-1 + 4) \times (-1 - 10)$ $F = 3 \times (-11)$ $F = -33$	g) $G = (2x - 1)(5 - 3x)$ et $x = 4$ $G = (2 \times 4 - 1) \times (5 - 3 \times 4)$ $G = (8 - 1) \times (5 - 12)$ $G = 7 \times (-7) = -49$	h) $H = -1 - (2 - 3x)$ et $x = -3$ $H = -1 - (2 - 3 \times (-3))$ $H = -1 - (2 + 9)$ $H = -1 - 11 = -12$

Corrigé Exercice 8

a) $I = x^2$ et $x = -3$ $I = (-3)^2$ $I = +9$	b) $J = 3x^2$ et $x = 5$ $J = 3 \times 5^2$ $J = 3 \times 25$ $J = 75$	c) $K = x^2 - 1$ et $x = -1$ $K = (-1)^2 - 1$ $K = 1 - 1$ $K = 0$	d) $L = (x - 5)^3$ et $x = 2$ $L = (2 - 5)^3$ $L = (-3)^3$ $L = -27$
e) $M = 3(x^2 - 2)$ et $x = 1$ $M = 3 \times (1^2 - 2)$ $M = 3 \times (1 - 2)$ $M = 3 \times (-1)$ $M = -3$	f) $N = (3 - 4x)^2$ et $x = 2$ $N = (3 - 4 \times 2)^2$ $N = (3 - 8)^2$ $N = (-5)^2$ $N = +25$	g) $P = 6 - x^2 + 4x$ et $x = -6$ $P = 6 - (-6)^2 + 4 \times (-6)$ $P = 6 - 36 + 4 \times (-6)$ $P = 6 - 36 - 24$ $P = 6 - 60$ (ou $-30 - 24$) $P = -54$	h) $Q = x^3 - (6 + 3x)^2$ et $x = -4$ $Q = (-4)^3 - (6 + 3 \times (-4))^2$ $Q = 64 - (6 - 12)^2$ $Q = 64 - (-6)^2$ $Q = 64 - 36$ $Q = 28$

Corrigé Exercice 9

1^{er} entraînement :

1) pour $x = 5$:

$$\mathbf{A} = 2x - 7$$

$$A = 2 \times 5 - 7$$

$$A = 10 - 7 = \underline{\underline{3}}$$

2) a) pour $x = 4$:

$$\mathbf{B} = 3x^2 - x$$

$$B = 3 \times 4^2 - 4$$

$$B = 3 \times 16 - 4$$

$$B = 48 - 4 = \underline{\underline{44}}$$

b) pour $x = -1$:

$$\mathbf{B} = 3x^2 - x$$

$$B = 3 \times (-1)^2 - (-1)$$

$$B = 3 \times 1 + 1 = \underline{\underline{4}}$$

3) quand t vaut -2 :

$$\mathbf{C} = \frac{1 - t^2}{t^3}$$

$$C = \frac{1 - (-2)^2}{(-2)^3}$$

$$C = \frac{1 - 4}{-8} = \frac{-3}{-8} = \frac{3}{8}$$

2^{ème} entraînement :

1) pour $x = -3$

$$\mathbf{D} = 4 - 5x$$

$$D = 4 - 5 \times (-3)$$

$$D = 4 + 15 = \underline{\underline{19}}$$

2) a) pour $x = 2$

$$\mathbf{E} = (3x - 2)^2$$

$$E = (3 \times 2 - 2)^2$$

$$E = (6 - 2)^2 = 4^2 = \underline{\underline{16}}$$

b) pour $x = -3$

$$\mathbf{E} = (3x - 2)^2$$

$$E = (3 \times (-3) - 2)^2$$

$$E = (-9 - 2)^2$$

$$E = (-11)^2 = \underline{\underline{121}}$$

3) quand m vaut 4

$$\mathbf{F} = \frac{m^2}{2 - 2m}$$

$$F = \frac{4^2}{2 - 2 \times 4}$$

$$F = \frac{16}{2 - 8} = \frac{16}{-6} = -\frac{8}{3}$$

