## Ex 1

1. $-4$     2. $1$     3. Voir graphique

4. $g(x) = -2x - 1$

## Ex 2

1. $\big((-1) \times 4 + 8\big) \times 2 = (-4 + 8) \times 2 = 8$

2. $(4x + 8) \times 2 = 30$   $4x + 8 = 15$   $x = \dfrac{15 - 8}{4} = \dfrac{7}{4}$

3. $(4 + x)^2 - x^2 = 16 + 8x + x^2 - x^2 = 16 + 8x = 2(4x + 8)$

4. • $4x + 8 > 0 \iff x > -2$   $\Rightarrow$ Aff. 1 : F

   • $2(4x + 8) = 8x + 16 = 8(x + 2)$ $\Rightarrow$ Aff. 2 : V

## Ex 3

1. $1995 \to 360$     $2005 \to 380$

2. a. proche d'une droite

   b. A : $g(1995) = 360$     $g(2005) = 380$

   B : $g(1995) = 1990 \Rightarrow$ Non

   $\Rightarrow$ Arnold

   c. $2x - 3630 = 450 \iff x = \dfrac{450 + 3630}{2} = 2040$

## Ex 4

### Partie A

1. $10 \text{ mg/L}$   2. $2h$

### Partie B

① $m = 33 \times 0,05 \times 7,9 = 13,035$

② $m = 12,5 \times 0,12 \times 7,9 = 11,85$   $\Rightarrow$ __Oui__

## Ex 5

$f(2) = 2a + b = 3$

$f(4) = 4a + b = 7$

$\quad -2a = -4 \Rightarrow a = 2 \Rightarrow b = 3 - 4 = -1$

$\quad\quad f(x) = 2x - 1$

## Ex 6

$2x - 1 > 0$    $\quad 2 - 3x > 0$
$x > \frac{1}{2}$    $\quad -3x > -2$
$\quad\quad\quad x < \frac{2}{3}$

| $x$ | $-\infty$ | | $1/2$ | | $2/3$ | | $+\infty$ |
|---|---|---|---|---|---|---|---|
| $2x-1$ | | $-$ | $\phi$ | | $+$ | | |
| $2-3x$ | | $+$ | | | $\phi$ | | $-$ |
| $Pr$ | | $-$ | $\phi$ | $+$ | $\phi$ | | $-$ |

## Ex 7

$x^2 - 9x - 22 = 0$

$\Delta = 81 + 4 \times 22 = 169$

$x_1 = \dfrac{9 - 13}{2} = -2$    $\quad x_2 = \dfrac{9 + 13}{2} = 11$

$S = \{-2 ; 11\}$