

## UNITAT 0

### REPÀS

#### Exercici 1

$$\frac{7}{8} = 0,875 \quad \text{Decimal finit}$$

$$\frac{11}{6} = 1,8\hat{3} \quad \text{Decimal periòdic mixt}$$

$$\frac{17}{90} = 0,1\hat{8} \quad \text{Decimal periòdic mixt}$$

$$\frac{4}{330} = 0,0121212\dots \quad \text{Decimal periòdic mixt}$$

#### Exercici 2

$$\text{a) } \frac{2}{5} \left( \frac{3}{2} - \frac{7}{10} \right) - \frac{1}{4} = \frac{2}{5} \cdot \frac{8}{10} - \frac{1}{4} = \frac{16}{50} - \frac{1}{4} = \frac{7}{100}$$

$$\text{b) } \frac{6}{7} - \frac{3}{4} \div \frac{7}{10} + \frac{2}{5} = \frac{6}{7} - \frac{10}{28} + \frac{2}{5} = \frac{840 - 350 + 392}{980} = \frac{882}{980} = \frac{441}{490}$$

$$\text{c) } \frac{6}{7} - \left( \frac{2}{3} \right)^3 \div \frac{1}{9} = \frac{6}{7} - \frac{8}{27} \div \frac{1}{9} = \frac{6}{7} - \frac{72}{27} = \frac{162 - 504}{189} = -\frac{342}{189}$$

#### Exercici 3

$$\text{a) } \left( \frac{3}{6} - \frac{4}{5} \right) \cdot \left( \frac{4}{12} - \frac{3}{6} \right) = \frac{-9}{30} \cdot \frac{-2}{12} = \frac{18}{360} = \frac{1}{20}$$

$$\text{b) } -\frac{2}{3} + \frac{1}{3} \cdot \left[ -\frac{7}{3} - (-2) \cdot \left( \frac{1}{4} - 3 \right) \right] = -\frac{2}{3} + \frac{1}{3} \cdot \left( -\frac{7}{3} + 2 \cdot \frac{-11}{4} \right) = -\frac{2}{3} + \frac{1}{3} \cdot \left( -\frac{7}{3} - \frac{22}{4} \right) =$$
$$= -\frac{2}{3} + \frac{1}{3} \cdot \frac{-94}{12} = \frac{-2}{3} - \frac{94}{36} = \frac{-24 - 94}{36} = \frac{-118}{36}$$

$$\text{c) } 2 - \frac{1}{3} \cdot \left( \frac{1}{2} + \frac{2}{5} \right) - \left( \frac{4}{3} + 2 \right) \cdot \frac{1}{5} = 2 - \frac{1}{3} \cdot \frac{9}{10} - \frac{10}{3} \cdot \frac{1}{5} = 2 - \frac{9}{30} - \frac{10}{15} = \frac{60 - 9 - 20}{30} = \frac{31}{30}$$

#### Exercici 4

$2x$

$2x^2$

$-3ab$

$-\frac{1}{2}\sqrt{3} + x$

#### Exercici 5

a)  $2x$    b)  $x^2$    c)  $\frac{1}{2}x - 3$    d)  $a - 2b$    e)  $x^3 - \frac{3x}{4}$    f)  $4x$    g)  $a + b$

h)  $(a - b)^2$    i)  $\frac{1}{5}x + 3x = \frac{x}{5} + 3x$

#### Exercici 6

a)  $5(2x - 4) = 10x - 20$   
 $2(2x - 1) + 2x - 16 = 4x - 2 + 2x - 16 = 6x - 20$  } *equació*

b)  $2x + 3$   
 $5(x - 1) - 3x + 8 = 5x - 5 - 3x + 8 = 2x + 3$  } *identitat*

c)  $2x - 8$   
 $3x + 6 - x + 2 = 2x + 8$  } *contradicció*

d)  $4(x - 3) = 4x - 12$   
 $3(x + 4) = 3x + 12$  } *equació*

e)  $4x + 6 - x - 3x = 6$   
 $5 + 8x - 3 - 2x = 6x + 2$  } *equació*

f)  $\frac{(x + 2)^2 - x^2 - x^4}{4} = \frac{x^2 + 4x + 4 - x^2 - 4x}{4} = 4$  } *identitat*

#### Exercici 7

a) *Membres* :  $2x + 3 \Leftrightarrow 5$   
*Termes* :  $2x \Leftrightarrow +3 \Leftrightarrow 5$

b) *Membres* :  $-x + 11x - 7 \Leftrightarrow 5x + x - 9x$   
*Termes* :  $-x \Leftrightarrow +11x \Leftrightarrow -7 \Leftrightarrow 5x \Leftrightarrow +x \Leftrightarrow -9x$

d) *Membres* :  $4x + 6 - x - 3x \Leftrightarrow 5 + 2x - 3 - 2x$   
*Termes* :  $4x \Leftrightarrow +6 \Leftrightarrow -x \Leftrightarrow -3x \Leftrightarrow 5 \Leftrightarrow +2x \Leftrightarrow -3 \Leftrightarrow -2x$

### Exercici 8

a)  $3(8x - 2) = 4(4x + 2) \rightarrow 24x - 6 = 16x + 8 \rightarrow 8x = 14 \rightarrow x = \frac{14}{8} = \frac{7}{4}$

b)  $2(7x + 1) = 3\left(2 - \frac{x}{5}\right) \rightarrow 14x + 2 = 6 - \frac{3x}{5} \rightarrow 70x + 10 = 30 - 3x \rightarrow$   
 $\rightarrow 73x = 20 \rightarrow x = \frac{20}{73}$

c)  $\frac{x-5}{6} - \frac{3(1-x)}{8} = x+1 \rightarrow \frac{x-5}{6} - \frac{3-3x}{8} = x+1 \rightarrow 8x - 40 - 18 + 18x = 48x + 48 \rightarrow$   
 $\rightarrow -22x = 106 \rightarrow X = -\frac{106}{22}$

### Exercici 9

$3 \cdot (x - 9) = x + 5 \rightarrow 3x - 27 = x + 5 \rightarrow 2x = 32 \rightarrow x = 16$

### Exercici 10

a) Directa

$$\left. \begin{array}{l} 7800 \rightarrow 150 \\ x \rightarrow 190 \end{array} \right\} \rightarrow x = \frac{7800 \cdot 190}{150} \rightarrow x = 9880$$

b) Directa

$$\left. \begin{array}{l} 7800 \rightarrow 150 \\ 8736 \rightarrow x \end{array} \right\} \rightarrow x = \frac{8736 \cdot 150}{7800} \rightarrow x = 168$$

### Exercici 11

a) Inversa

$$\left. \begin{array}{l} 120 \rightarrow 3 \\ 180 \rightarrow x \end{array} \right\} \rightarrow x = \frac{120 \cdot 3}{180} \rightarrow x = 2$$

b) Directa

$$\left. \begin{array}{l} 360 \rightarrow 3 \\ 540 \rightarrow x \end{array} \right\} \rightarrow x = \frac{540 \cdot 3}{360} \rightarrow x = 4,5$$

### Exercici 12

Directa

$$\left. \begin{array}{l} 2 \rightarrow 5,20 \\ 5 \rightarrow x \end{array} \right\} \rightarrow x = \frac{5,20 \cdot 5}{2} \rightarrow x = 13$$

### Exercici 13

Inversa

$$\left. \begin{array}{l} 80 \rightarrow 3 \\ 60 \rightarrow x \end{array} \right\} \rightarrow x = \frac{80 \cdot 3}{6} \rightarrow x = 4$$

### Exercici 14

Inversa

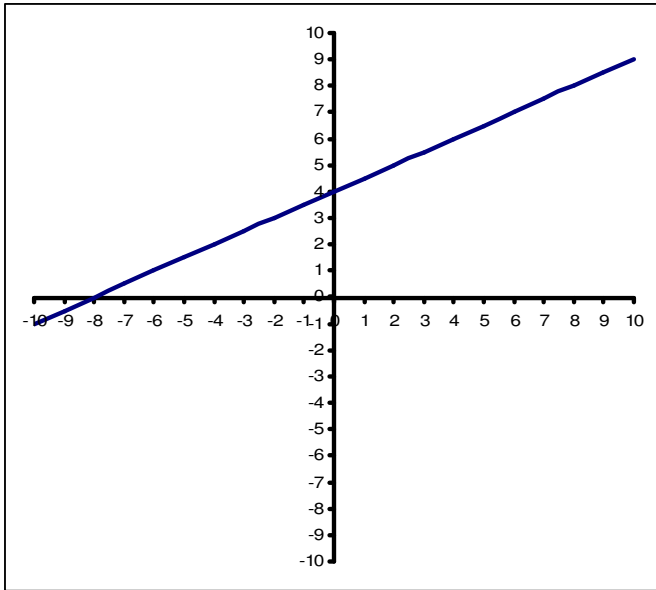
$$\left. \begin{array}{l} 5 \rightarrow 8 \\ 3 \rightarrow x \end{array} \right\} \rightarrow x = \frac{8 \cdot 5}{3} \rightarrow x = 13,3\hat{3}$$

### Exercici 15

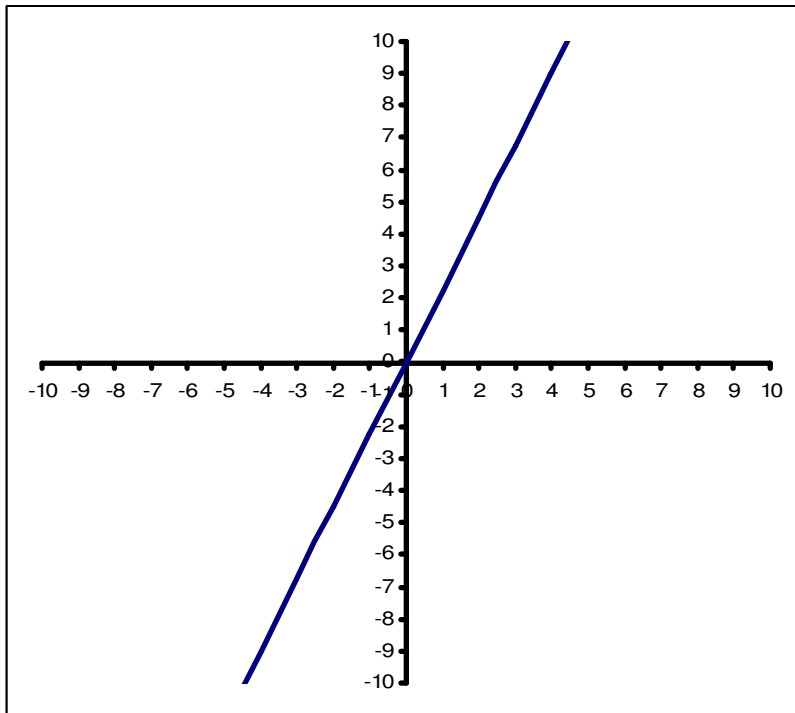
a) NO   b) SI   c) NO   d) NO

### Exercici 16

a)  $y = \frac{1}{2}x + 4$        $f(x) = \frac{1}{2}x + 4$



b)  $y = 2,25x$



### Exercici 17

- a) Associa a cada nombre el seu cub menys ú
- b) Associa a cada nombre el seu predecessor elevat al cub
- c) Associa a cada nombre la seua cinquena part més dos
- d) Associa a cada nombre el producte d'aquest nombre pel seu successor
- e) Associa a cada nombre el producte d'aquest nombre per nou menys dos
- f) Associa a cada nombre el seu quadrat més aquest nombre

### Exercici 18

$$y = 8,2x$$

