

# FEUILLE DE RÉVISIONS N° 11

## Chapitre n° 11 (p. 105-106 du TD)

### Exercice 1

$$\frac{1}{2} + \frac{3}{5} = \frac{1 \times 5}{2 \times 5} + \frac{3 \times 2}{5 \times 2} = \frac{5}{10} + \frac{6}{10} = \frac{5+6}{10} = \frac{11}{10}$$

$$\frac{13}{14} - \frac{5}{7} = \frac{13}{14} - \frac{5 \times 2}{7 \times 2} = \frac{13}{14} - \frac{10}{14} = \frac{13-10}{14} = \frac{3}{14}$$

$$4 + \frac{5}{12} = \frac{4 \times 12}{1 \times 12} + \frac{5}{12} = \frac{48}{12} + \frac{5}{12} = \frac{48+5}{12} = \frac{53}{12}$$

$$9 \times \frac{2}{5} = \frac{18}{5}$$

$$\frac{16}{9} \times \frac{3}{11} = \frac{16 \times 3}{9 \times 11} = \frac{16 \times 3}{3 \times 3 \times 11} = \frac{16}{33}$$

$$5 \times \frac{2}{3} - \frac{1}{3} = \frac{10}{3} - \frac{1}{3} = \frac{9}{3} = 3$$

$$\left(\frac{5}{6} + \frac{7}{12}\right) \times \frac{3}{5} = \left(\frac{10}{12} + \frac{7}{12}\right) \times \frac{3}{5} = \frac{17}{12} \times \frac{3}{5} = \frac{17 \times 3}{4 \times 3 \times 5} = \frac{17}{20}$$

$$\frac{7}{4} - \frac{3}{4} \times \frac{3}{2} = \frac{7}{4} - \frac{9}{8} = \frac{14}{8} - \frac{9}{8} = \frac{5}{8}$$

$$2 - \frac{1}{3} = \frac{6}{3} - \frac{1}{3} = \frac{5}{3}$$

$$\frac{8}{11} \times 7 = \frac{56}{11}$$

### Exercice 2

1. À deux, ils ont mangé  $\frac{1}{4} + \frac{3}{8} = \frac{1 \times 2}{4 \times 2} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{2+3}{8} = \frac{5}{8}$  du gâteau.

2. Il reste donc logiquement  $\frac{3}{8}$ .

### Exercice 3

$$A = x^2 + 4x - 10$$

$$A = (-6)^2 + 4 \times (-6) - 10$$

$$A = 36 - 24 - 10$$

$$A = 2$$

$$B = 5x^2 - 3x + 11$$

$$B = 5 \times 4^2 - 3 \times 4 + 11$$

$$B = 80 - 12 + 11$$

$$B = 79$$

$$C = -7x^2 + 12$$

$$C = -7 \times 3^2 + 12$$

$$C = -63 + 12$$

$$C = -51$$

### Exercice 4

$$A = 3(x+2) = 3 \times x + 3 \times 2 = 3x + 6$$

$$B = 7(x-6) = 7 \times x - 7 \times 6 = 7x - 42$$

$$C = 5(3x-8) = 5 \times 3x - 5 \times 8 = 15x - 40$$

$$D = 6(2x+9) = 6 \times 2x + 6 \times 9 = 12x + 54$$

$$E = x(11+4x) = x \times 11 + x \times 4x = 11x + 4x^2$$

$$F = 2x(5-4x) = 2x \times 5 - 2x \times 4x = 10x - 8x^2$$

## Exercice 5

$$A = 7 + 21x = 7 \times 1 + 7 \times 3x = 7(1 + 3x).$$

$$B = 8y + 12 = 4 \times 2y + 4 \times 3 = 4(2y + 3).$$

$$C = 49a - 56 = 7 \times 7a - 7 \times 8 = 7(7a - 8).$$

$$D = 25x + 15 = 5 \times 5x + 5 \times 3 = 5(5x + 3).$$

$$E = 4x + 4 = 4 \times x + 4 \times 1 = 4(x + 1).$$

$$F = x^2 + 13x = x \times x + 13 \times x = x(x + 13).$$

$$G = 9t - 9 = 9 \times t - 9 \times 1 = 9(t - 1).$$

$$H = 3 - 18y = 3 \times 1 - 3 \times 6y = 3(1 - 6y).$$

## Exercice 6

$$A = 5x + 4x = 9x.$$

$$B = 5ab - 9ab + 3 = -4ab + 3.$$

$$C = 5x^2 + 12 - 6x^2 = -x^2 + 12.$$

$$D = 3 + 4t - 12t - 7t - 3 = -15t + 0 = -15t.$$

## Exercice 7

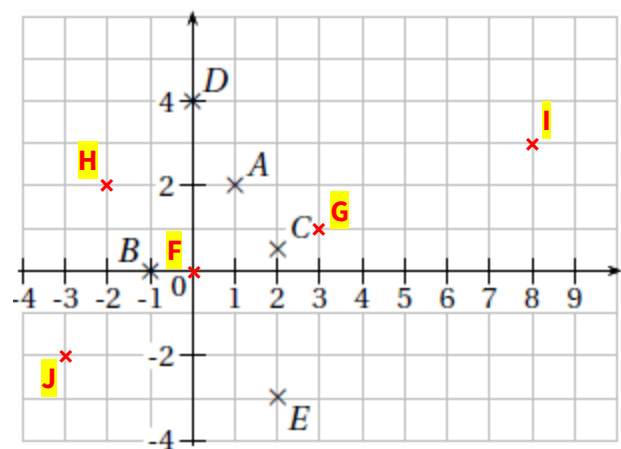
$$A(1; 2)$$

$$B(-1; 0)$$

$$C(2; 0,5)$$

$$D(0; 4)$$

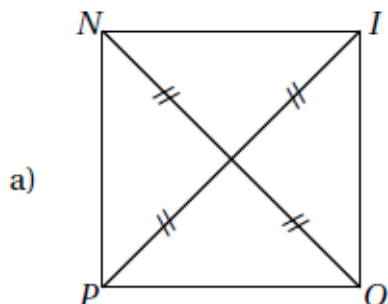
$$E(2; -3)$$



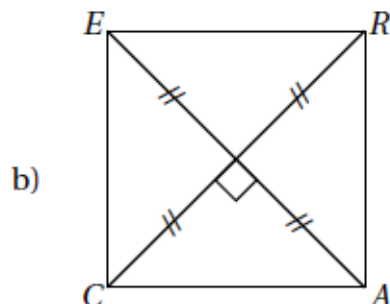
## Exercice 8

À midi, Bruno a mangé  $\frac{1}{4}$  du gâteau, il en reste donc  $\frac{3}{4}$ . Au goûter de 4h, il a mangé le quart du reste, donc  $\frac{1}{4}$  de  $\frac{3}{4} = \frac{1}{4} \times \frac{3}{4} = \frac{3}{16}$ . Par conséquent, **il reste  $\frac{13}{16}$  pour le dîner.**

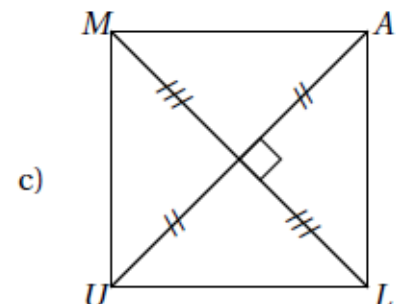
## Exercice 9



.....  
**rectangle**



.....  
**carré**



.....  
**losange**

## Exercice 10

1.  $\mathcal{V} = 30 \times 15 \times 20 = 600 \times 15 = 9000 \text{ cm}^3$ .

2.  $\mathcal{V}_m = \frac{9}{10} \times 9000 = \frac{9 \times 900 \times 10}{10 \times 1} = 8100 \text{ cm}^3$ .

## Exercice 11

$$\mathcal{P}_{\text{figure A}} = 4 + (x + 1) + x + (3x + 1) = 6 + 5x.$$

$$\mathcal{P}_{\text{figure B}} = 3 + (3 \times x) + (2x + 3) = 3 + 3x + 2x + 3 = 6 + 5x.$$

**On en déduit que Youcef a raison.**