

FEUILLE DE RÉVISIONS N° 10

Chapitre n° 10 (p. 97-98 du TD)

Exercice 1

$$A = 3 \times 6 - 2 \times 2 = 18 - 2 \times 2 = 18 - 4 = \mathbf{14}.$$

$$B = \frac{3}{5} \times (6+2) = \frac{3}{5} \times 8 = \frac{24}{5} = \mathbf{4,8}.$$

$$C = \frac{1}{2} \times \left(\frac{1}{3} + \frac{4}{3} \right) = \frac{1}{2} \times \frac{1+4}{3} = \frac{1}{2} \times \frac{5}{3} = \frac{1 \times 5}{2 \times 3} = \mathbf{\frac{5}{6}}.$$

$$D = \frac{5}{4} - \frac{1}{2} \times \frac{5}{2} = \frac{5}{4} - \frac{1 \times 5}{2 \times 2} = \frac{5}{4} - \frac{5}{4} = \mathbf{0}.$$

Exercice 2

$$E = 3x^2 - 5x + 1$$

$$E = 3 \times 3^2 - 5 \times 3 + 1$$

$$E = 27 - 15 + 1$$

$$E = \mathbf{13}.$$

$$F = 8b - 21$$

$$F = 8 \times 10 - 21$$

$$F = 80 - 21$$

$$F = \mathbf{59}.$$

Exercice 3

D : ABC est un triangle.

P : La somme des mesures des angles d'un triangle vaut 180° .

$$C : \widehat{ABC} = 180^\circ - (40^\circ + 30^\circ)$$

$$\widehat{ABC} = 180^\circ - 70^\circ$$

$$\widehat{ABC} = \mathbf{110^\circ}.$$

D : \widehat{DFE} est un angle plat et $\widehat{DFG} = 130^\circ$.

P : Un angle plat mesure 180° .

$$C : \widehat{GFE} = 180^\circ - 130^\circ = \mathbf{50^\circ}.$$

D : EFG est un triangle.

P : La somme des mesures des angles d'un triangle vaut 180° .

$$C : \widehat{FEG} = 180^\circ - (50^\circ + 80^\circ)$$

$$\widehat{FEG} = 180^\circ - 130^\circ$$

$$\widehat{FEG} = \mathbf{50^\circ}.$$

D : HIE est un triangle.

P : La somme des mesures des angles d'un triangle vaut 180° .

$$C : \widehat{IEH} = 180^\circ - (90^\circ + 47^\circ)$$

$$\widehat{IEH} = 180^\circ - 137^\circ$$

$$\widehat{IEH} = \mathbf{43^\circ}.$$

Exercice 4

$$A = \frac{1}{7} + \frac{3}{4} = \frac{1 \times 4}{7 \times 4} + \frac{3 \times 7}{4 \times 7} = \frac{4}{28} + \frac{21}{28} = \frac{4+21}{28} = \mathbf{\frac{25}{28}}.$$

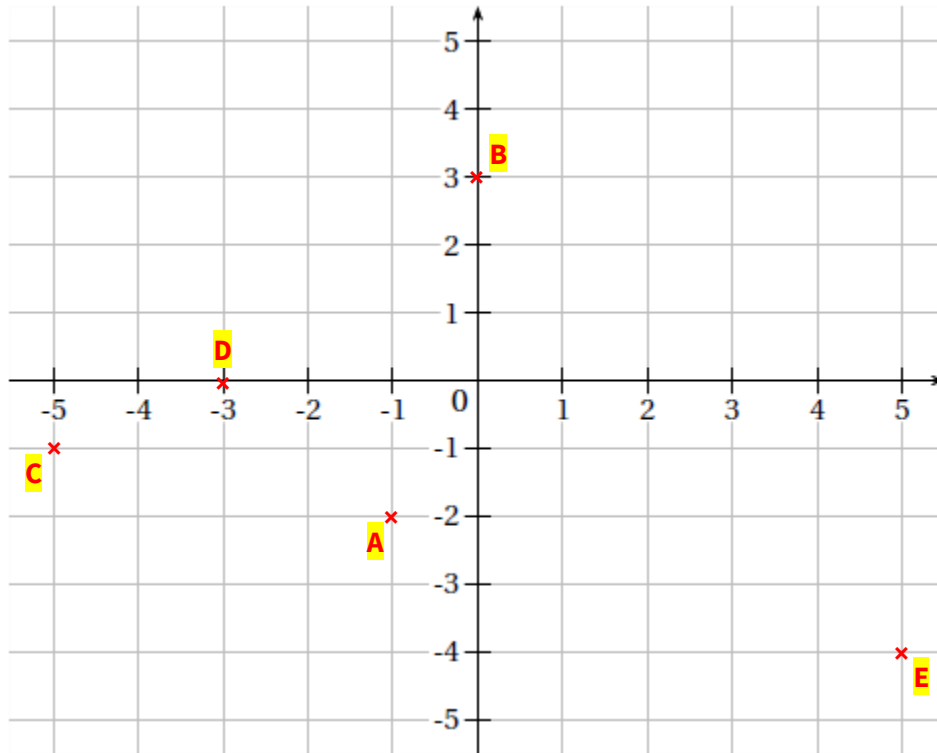
$$B = 5 \times \frac{8}{7} = \frac{5 \times 8}{7} = \mathbf{\frac{40}{7}}.$$

$$C = \frac{8}{7} - \frac{3}{7} = \frac{8-3}{7} = \mathbf{\frac{4}{7}}.$$

$$D = \frac{7}{10} + \frac{5}{2} = \frac{7 \times 2}{10 \times 2} + \frac{5 \times 10}{2 \times 10} = \frac{14}{20} + \frac{50}{20} = \frac{64}{20} = \frac{16 \times 4}{5 \times 4} = \mathbf{\frac{16}{5}}.$$

$$E = \frac{12}{11} - 1 = \frac{12}{11} - \frac{11}{11} = \frac{12-11}{11} = \mathbf{\frac{1}{11}}.$$

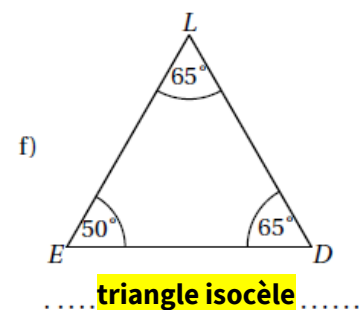
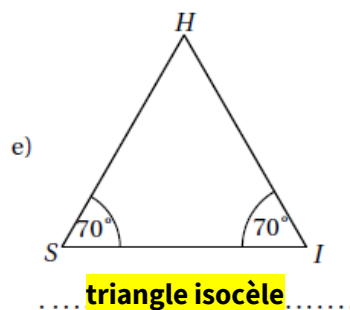
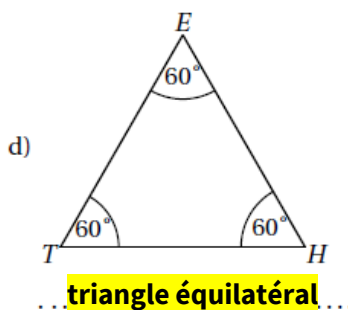
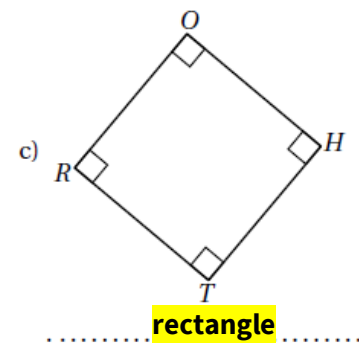
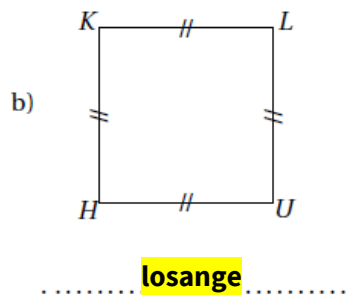
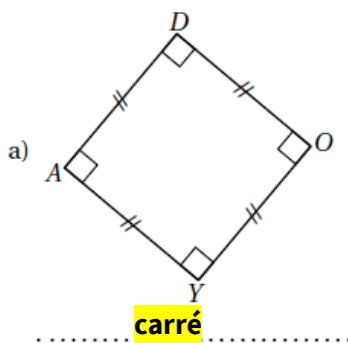
Exercice 5



Exercice 6

À eux deux, ils ont mangé $\frac{1}{6} + \frac{1}{5} = \frac{1 \times 5}{6 \times 5} + \frac{1 \times 6}{5 \times 6} = \frac{5}{30} + \frac{6}{30} = \frac{5+6}{30} = \frac{11}{30}$ du gâteau.

Exercice 7



Exercice 8

a) $\mathcal{A}_{ABCDEF} = \mathcal{A}_{ABFG} + \mathcal{A}_{CDEF} = 5 \times 10 + 3,5 \times 8 = 50 + 3,5 \times 8 = 50 + 28 = 78 \text{ cm}^2$.

b) $\mathcal{A}_{\text{partie colorée}} = \mathcal{A}_{ABCD} - \mathcal{A}_{MCN} - \mathcal{A}_{PBN} = (4,5 + 3,5)^2 - \frac{3,5 \times 4}{2} - \frac{4,5 \times 2}{2} = 64 - 7 - 4,5 = 52,5 \text{ cm}^2$.

Exercice 9

Il s'agit de calculer $12,28 + 3,25 = 15,53$. Le livre coûte donc 15,53 €.