

5^e

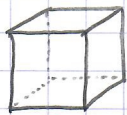
Correction de la fiche 40

Exercice 1:

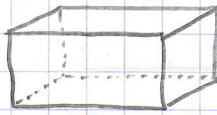
Un prisme droit a deux faces identiques et parallèles.

Exercice 2:

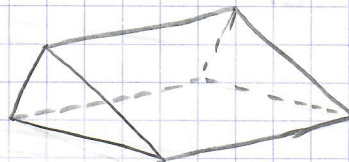
a.



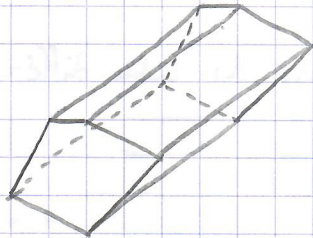
cube



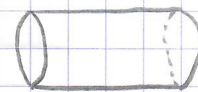
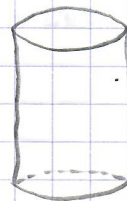
parallélépipède rectangle



prisme droit à base triangulaire

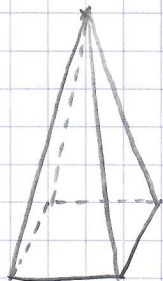


prisme droit à base pentagonale



cylindre de révolution

b.



pyramide à base carrée



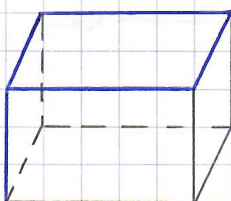
cône de révolution



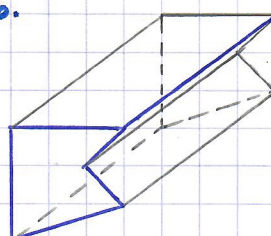
sphère

Exercice 3:

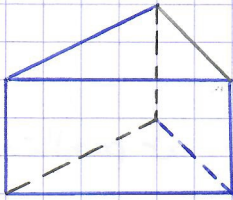
a.



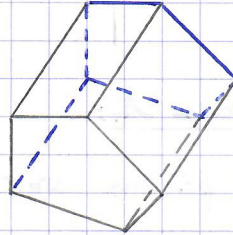
b.



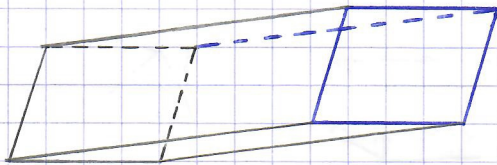
c.



d.

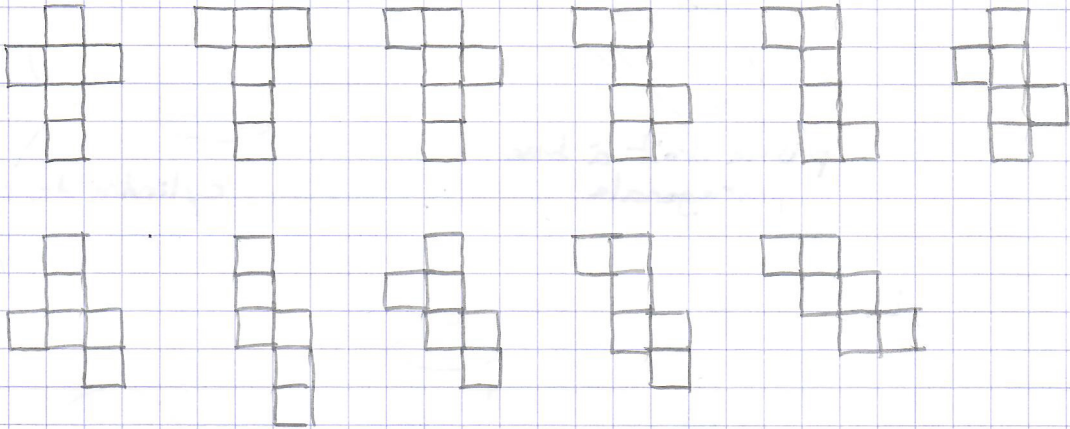


e.



Exercice 4 :

a et b : Il existe 11 patrons du cube différents.

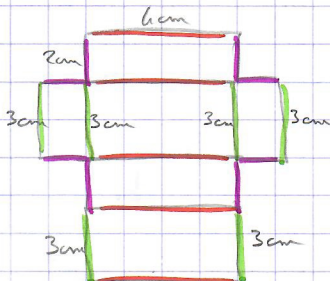
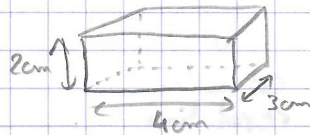


Exercice 5 :

Brouillon :

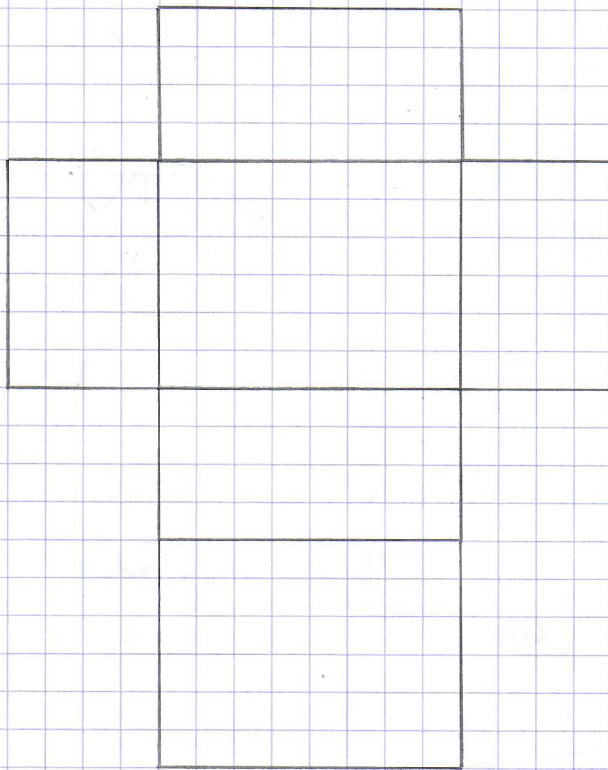
représentation
en perspective

patron

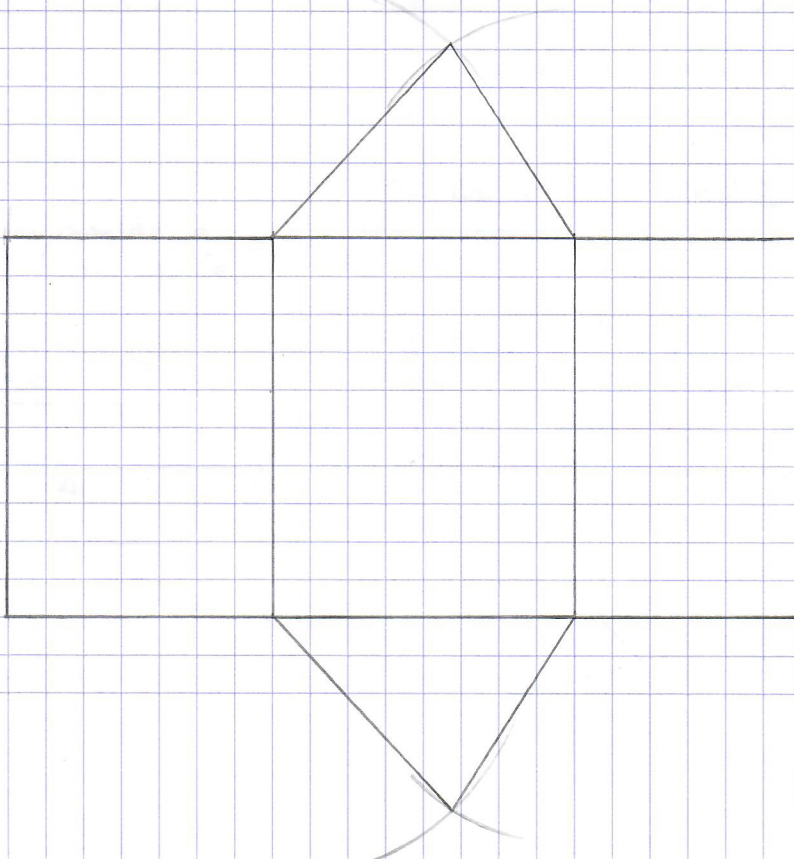
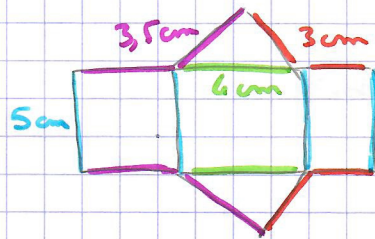
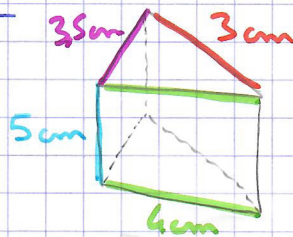


12cm
3cm

4cm

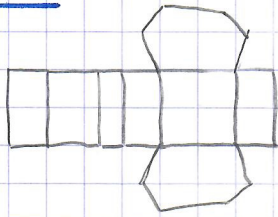


Exercise 6:

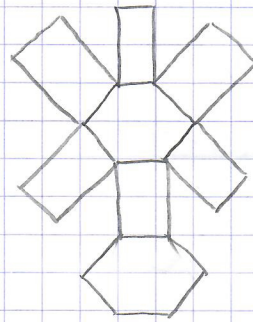


Exercice 7:

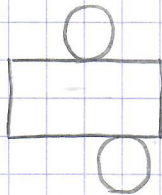
a.



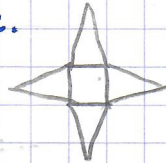
ou



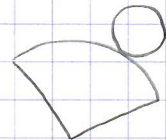
b.



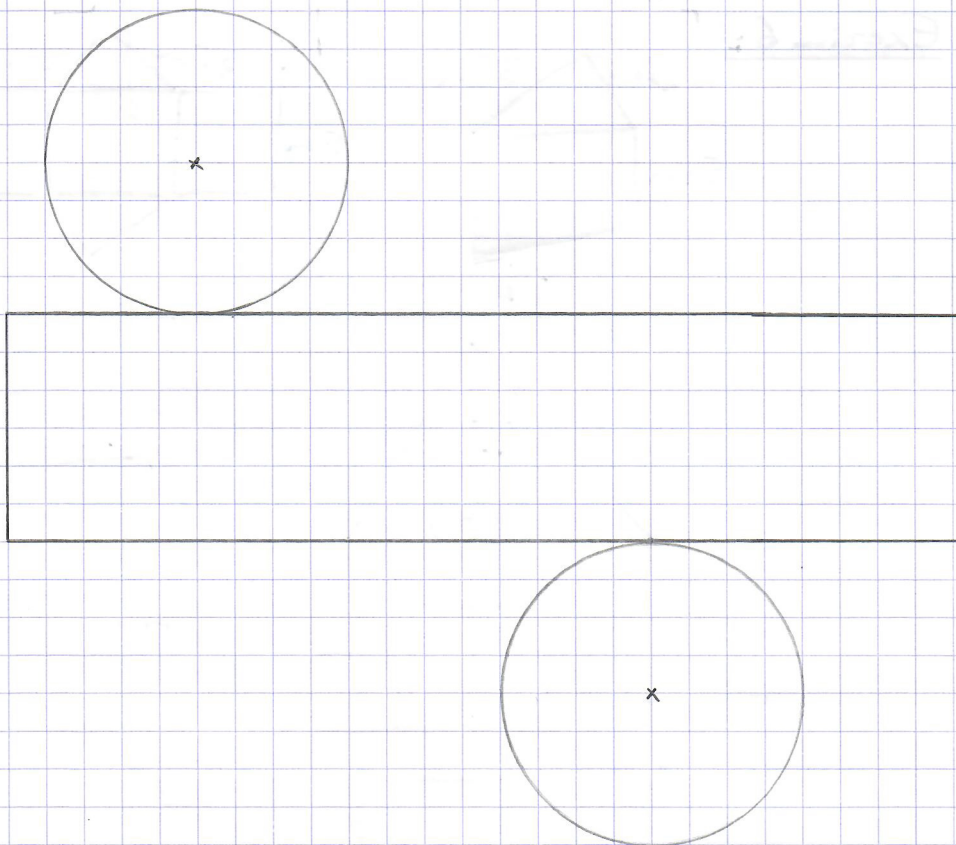
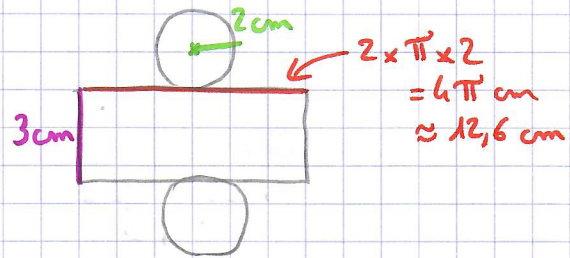
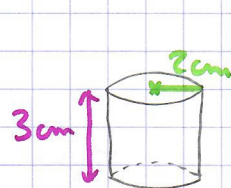
c.



d.



Exercice 8:



Exercice 9:

a. $0,06 \text{ m}^3 = 60\,000 \text{ cm}^3$

b. $76,4 \text{ m}^3 = 76\,400\,000 \text{ cm}^3$

c. $0,5 \text{ L} = 50 \text{ cL}$

d. $1359 \text{ mL} = 13,59 \text{ dL}$

e. $1 \text{ dm}^3 = 1 \text{ L}$

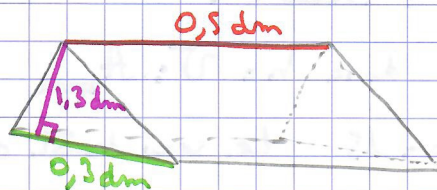
f. $20 \text{ L} = 2000 \text{ cL} = 0,02 \text{ m}^3$

g. $104,2 \text{ mL} = 0,1042 \text{ L} = 104,2 \text{ cm}^3$

h. $358 \text{ mm}^3 = 0,000358 \text{ dm}^3$
 $= 358 \text{ mL}$

Exercice 10:

a.



$$V = A_{\text{base}} \times h$$

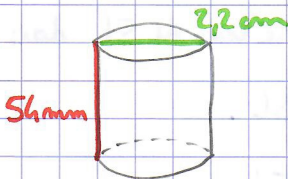
$$V = \frac{0,3 \times 1,3}{2} \times 0,5$$

$$V = 0,195 \times 0,5$$

$$V = 0,0975$$

Le prisme a un volume de $0,0975 \text{ dm}^3$ soit $97,5 \text{ cm}^3$.

b.



$$h = 54 \text{ mm} = 5,4 \text{ cm}$$

$$R = 2,2 \text{ cm} : 2 = 1,1 \text{ cm}$$

$$V = A_{\text{base}} \times h$$

$$V = \pi \times R^2 \times h$$

$$V = \pi \times 1,1^2 \times 5,4$$

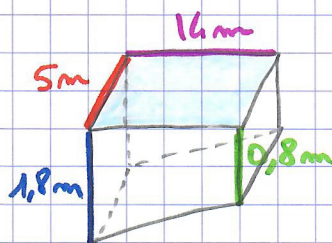
$$V = 6,534 \pi$$

$$V \approx 20,5 \text{ cm}^3$$

Le cylindre a un volume d'environ $20,5 \text{ cm}^3$.

Exercice 11:

a.



$$b. V = \frac{(0,8 + 1,8) \times 16}{2} \times 5$$

$$V = 1,3 \times 16 \times 5$$

$$V = 91 \text{ m}^3$$

La piscine a un volume de 91 m^3 .

c. $91 \text{ m}^3 = 91000 \text{ L}$

$12 \text{ L en } 1 \text{ min}$

$91000 \text{ L en } ?$

$91000 : 12 \approx 7583 \text{ min}$

Il faudra environ 7583 min pour remplir la piscine,
soit environ 126 h et 23 min.

Exercice 12:

a. $3 \text{ L} = 3 \text{ dm}^3 = 3000 \text{ cm}^3$

$V = A_{\text{base}} \times h$ donc $h = V : A_{\text{base}}$

$h_1 = 3000 : 200 = 15$ Le seau de 3L a une hauteur de 15 cm.

$h_2 = 5000 : 200 = 25$ Le seau de 5L a une hauteur de 25 cm.

b. * Paul remplit le seau de 5L, puis le verse dans le seau de 3L.

* Paul vide le seau de 3L, il lui reste 2L dans le seau de 5L.

* Paul verse ce qu'il y a dans le seau de 5L dans le seau de 3L; il y a 2L dans le seau de 3L.

* Paul remplit le seau de 5L.

* Paul verse le seau de 5L dans le seau de 3L jusqu'à ce qu'il soit plein : il a rajouté 1L dans le seau de 3L et donc il a bien 4L dans le seau de 5L.