

CORRIGE – M. QUET

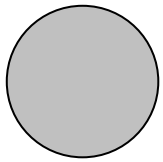
EXERCICE 1

Calculer le périmètre et l'aire des disques suivants (« R » est le rayon, « d » est le diamètre) :

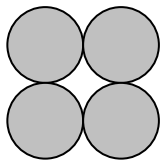
	R	d	Périmètre $P = 2 \pi R$	Aire $A = \pi R^2$
1.	3 cm	6 cm	$6 \pi \approx 18,85$	$\pi \times 3^2 \approx 28,3$
2.	10 cm	20 cm	$20 \pi \approx 62,8$	$\pi \times 10^2 \approx 314$
3.	2,5 cm	5 cm	$5 \pi \approx 15,7$	$\pi \times 2,5^2 \approx 19,6$
4.	2 m	4 m	$4 \pi \approx 12,6$	$\pi \times 2^2 \approx 12,6$
5.	1,5 km	3 km	$3 \pi \approx 9,4$	$\pi \times 1,5^2 \approx 7,1$

EXERCICE 2

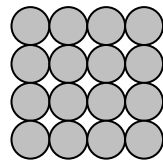
Quelle est la figure ayant l'aire la plus grande ?



$$A = \pi \times 1^2 \approx 3,14 \text{ cm}^2$$

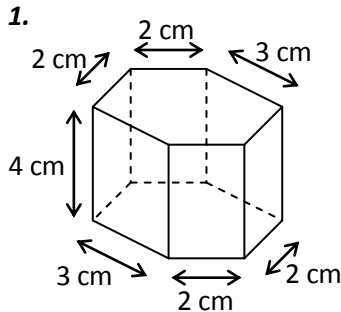


$$A = 4 \times (\pi \times 0,5^2) \approx 3,14 \text{ cm}^2$$

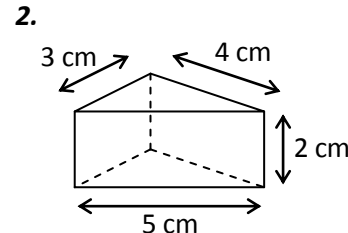


$$A = 16 \times (\pi \times 0,25^2) \approx 3,14 \text{ cm}^2$$

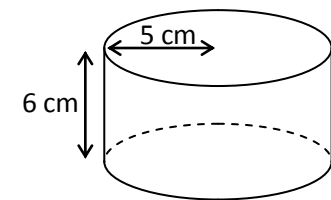
EXERCICE 3 : Calculer l'aire latérale de ces solides :



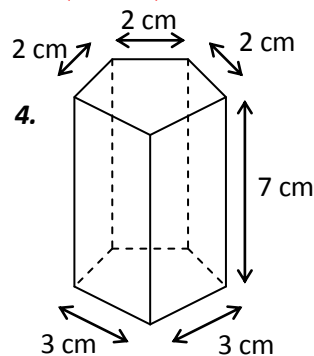
$$A = 4 \times (2 + 2 + 3 + 3 + 2 + 2) = 28 \text{ cm}^2$$



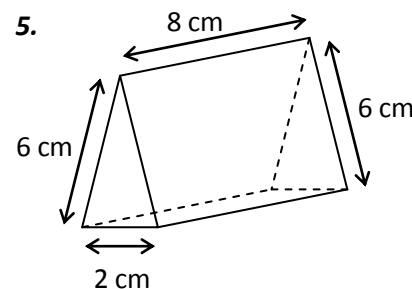
$$A = 2 \times (3 + 4 + 5) = 24 \text{ cm}^2$$



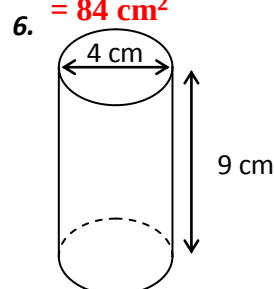
$$A = 2 \times \pi \times 5 \times 6 \approx 188,5 \text{ cm}^2$$



$$A = 7 \times (2 + 2 + 2 + 3 + 3) = 84 \text{ cm}^2$$

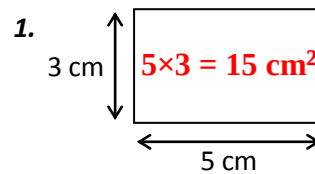


$$A = 8 \times (6 + 6 + 2) = 112 \text{ cm}^2$$

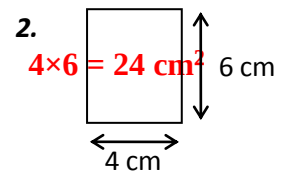


$$A = \pi \times 4 \times 9 \approx 113,1 \text{ cm}^2$$

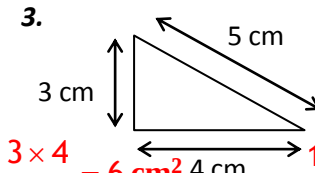
EXERCICE 4 : Calculer l'aire des figures suivantes :



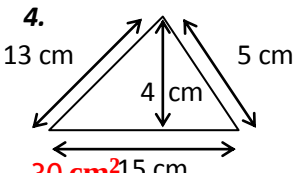
$$5 \times 3 = 15 \text{ cm}^2$$



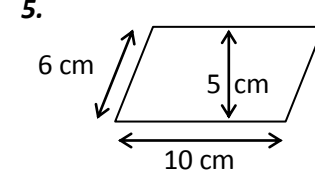
$$4 \times 6 = 24 \text{ cm}^2$$



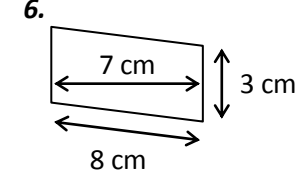
$$\frac{3 \times 4}{2} = 6 \text{ cm}^2$$



$$\frac{15 \times 4}{2} = 30 \text{ cm}^2$$

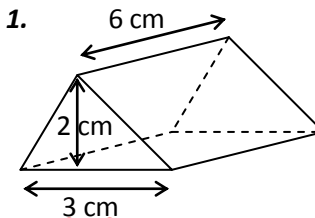


$$10 \times 5 = 50 \text{ cm}^2$$

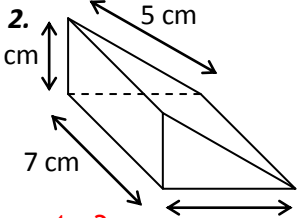


$$3 \times 7 = 21 \text{ cm}^2$$

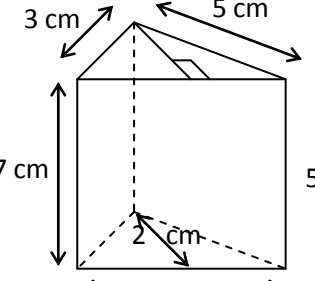
EXERCICE 5 : Calculer le volume de ces solides :



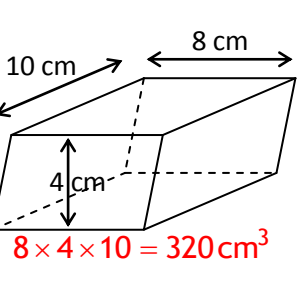
$$\frac{3 \times 2}{2} \times 6 = 18 \text{ cm}^3$$



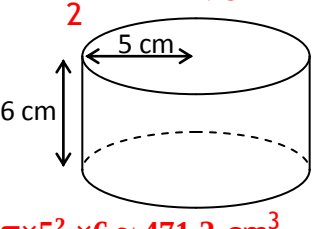
$$\frac{4 \times 3}{2} \times 7 = 42 \text{ cm}^3$$



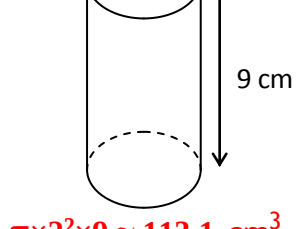
$$\frac{7 \times 2}{2} \times 7 = 49 \text{ cm}^3$$



$$8 \times 4 \times 10 = 320 \text{ cm}^3$$



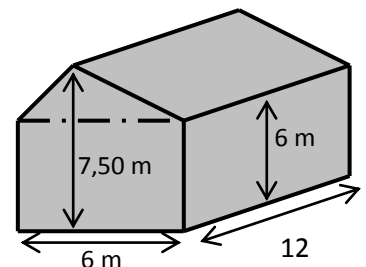
$$\pi \times 5^2 \times 6 \approx 471,2 \text{ cm}^3$$



$$\pi \times 2^2 \times 9 \approx 113,1 \text{ cm}^3$$

EXERCICE 6

Calculer le volume de cette maison :



Volume du pavé droit + volume du prisme :

$$6 \times 12 \times 6 + 6 \times 12 \times (7,50 - 6) = 432 + 108 = 540 \text{ cm}^3$$