الهندسة المستوية plane Géométrie

Séance 19 de mathématiques -niveau primaire-
Périmètre et surface

Périmètre : Somme des longueurs des côtés d'une figure géométrique.

المحيط : هو مجموع أطوال أضلاع الشكل الهندسي.

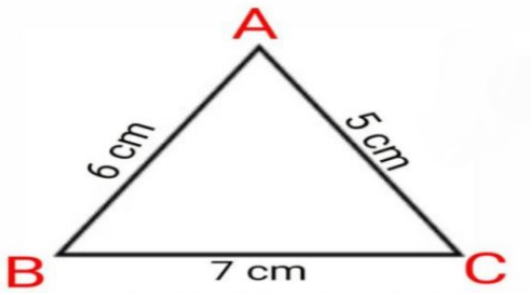
• **Aire** : Surface occupée par une figure sur un plan.

المساحة : هي السطح الذي يشغله شكل هندسي على مستوى.

Exemples

Triangle

Périmètre :



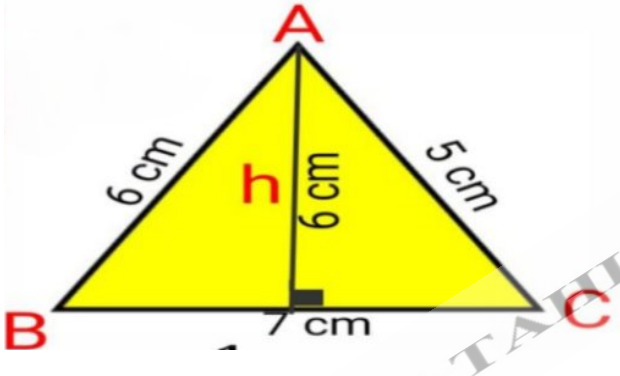
Pour calculer le périmètre du triangle ABC, on additionne les longueurs de ses côtés :

- **AB**=6 cm
- **BC**=5 cm
- **CA**=7 cm

Périmètre :

P=AB+BC+CA=6 cm+5 cm+7 cm=18

Aire:



Pour calculer l'aire du triangle ABC, on utilise la formule :

$$A = \frac{1}{2} \times \text{base} \times \text{hauteur}$$

Dans ce cas, la base peut être prise comme BC=7 cm et la hauteur h=6 cm

Calcul de l'aire :

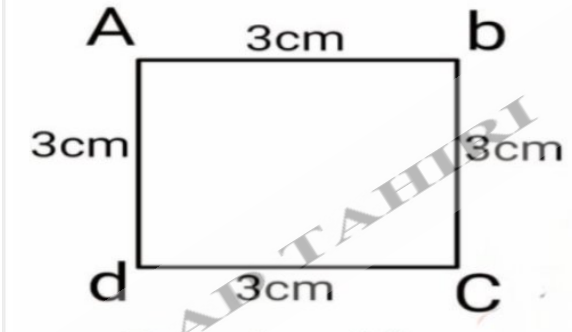
$$A = \frac{1}{2} \times 7\,\text{cm} \times 6\,\text{cm}$$

$$A = \frac{1}{2} \times 42\,\text{cm}^2$$

$$A = 21\,\text{cm}^2$$

Carré

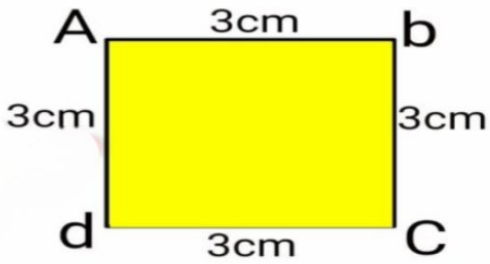
Périmètre :



$$P = 4 \times Ab$$

$$P = 4 \times 3 = 12\ cm$$

Aire:

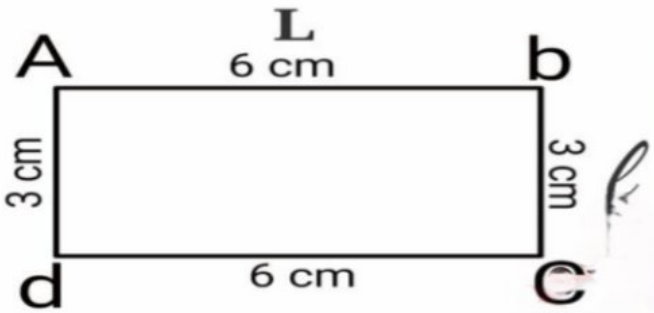


$$S = Ab \times Ab = Ab^2$$

$$S = 3 \times 3 = 3^2 = 9cm^2$$

Rectangle

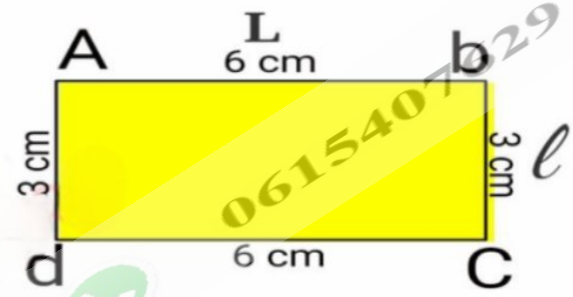
Périmètre :



$$P = 2 \times (L + \ell)$$

$$P = 2 \times (6 + 3) = 18\ cm$$

Aire:



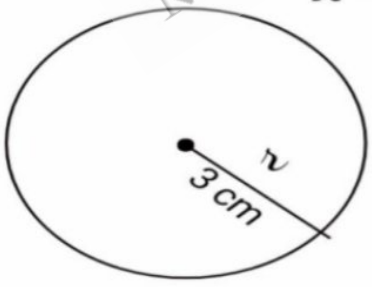
$$S = L \times \ell$$

$$S = 6 \times 3 = 18\ cm^2$$

Cercle

Périmètre :

$\pi = 3,14$

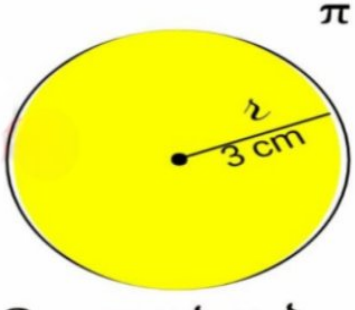


$$P = 2 \times \pi \times r$$

$$P = 2 \times 3,14 \times 3 = 18,84\ cm$$

Aire:

$\pi = 3,14$



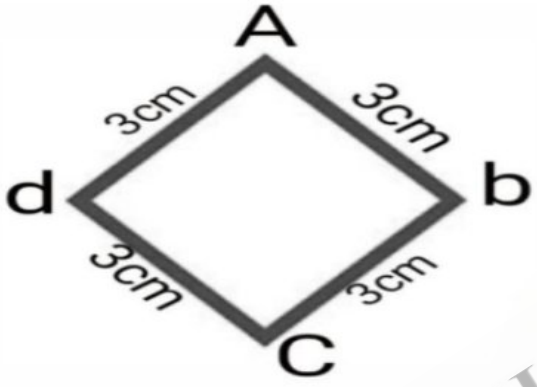
$$S = \pi \times r \times r$$

$$S = 3,14 \times 3 \times 3 = 28,26\ cm^2$$

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Losange

Périmètre : **Aire:**



$$P = 4 \times Ab$$

$$P = 4 \times 3 = 12 \text{ cm}$$

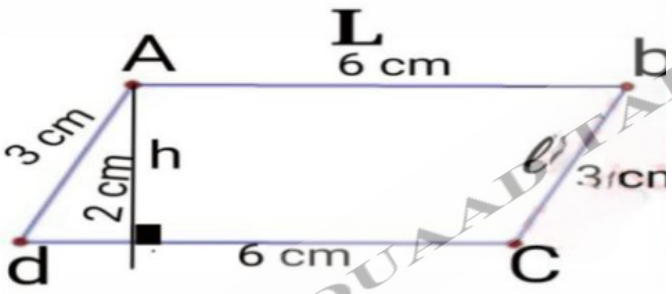


$$S = \frac{1}{2} \times (d \times D)$$

$$S = \frac{1}{2} \times (3 \times 5) = 7{,}5 \text{ cm}^2$$

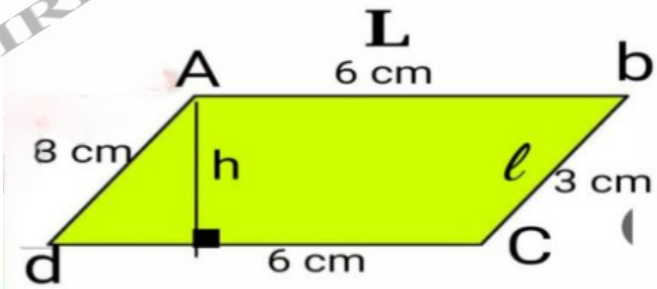
Parallélogramme

Périmètre : **Aire:**



$$P = 2 \times (L \times \ell)$$

$$P = 2 \times (6 \times 3) = 36 \text{ cm}$$



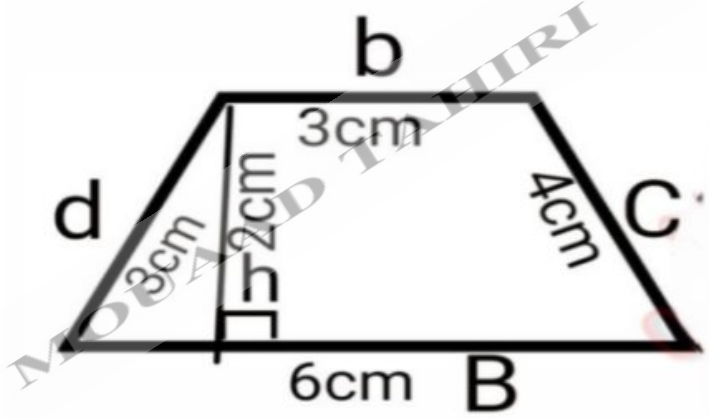
$$S = ab \times h$$

$$S = 6 \times 2 = 12 \text{ cm}^2$$

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Trapèze

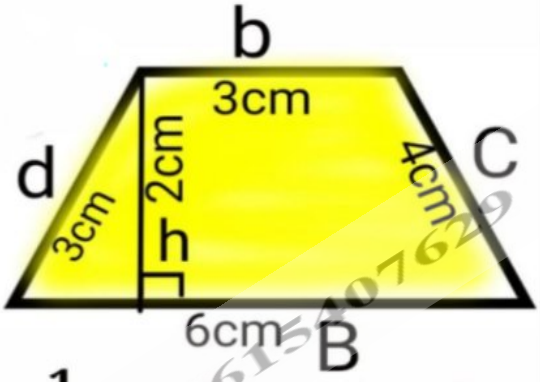
Périmètre :



$$P = b + C + B + d$$

$$P = 3 + 4 + 6 + 3 = 16 \text{ cm}$$

Aire:



$$S = \frac{1}{2} \times (b + B) \times h$$

$$S = \frac{1}{2} \times (3 + 6) \times 2 = 9 \text{ cm}^2$$

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