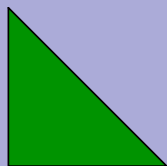
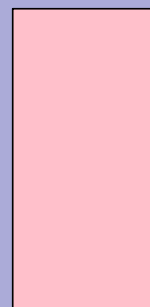
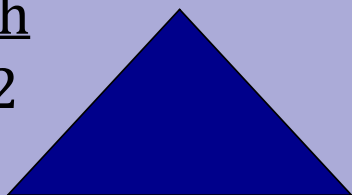


# Module 4: L'aire

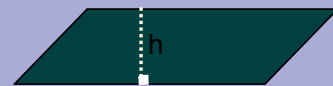
$$A = \frac{1}{2} bh$$



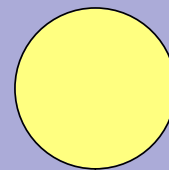
$$A = \frac{bh}{2}$$



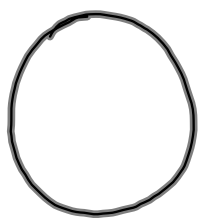
$$A = bh$$



$$A = bh$$



$$A = \pi r^2$$
$$A = \pi rr$$



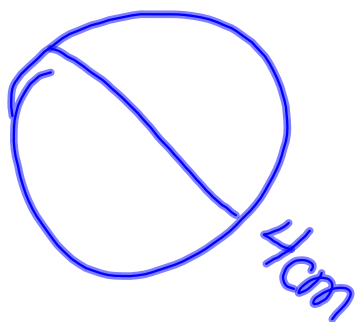
$$C_e = 3d$$

e = estimé

d = diamètre

$$C = \pi d$$

$$\pi = 3,14$$

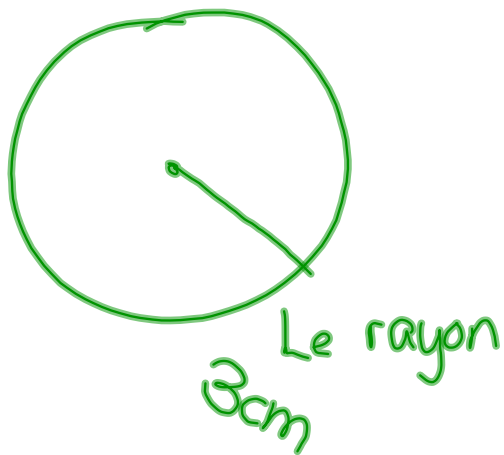


Trouve C

$$C = \pi d$$

$$C = 3,14(4\text{cm})$$

$$C = 12,56\text{cm}$$



$$C = \pi d \quad d = 2r$$
$$C = 2\pi r$$

$$C = 2\pi r$$

$$C = 2(3,14)(3\text{cm})$$

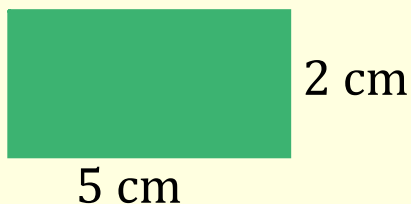
$$C = 18,84\text{cm}$$

## L'aire d'un rectangle

$$A = \text{base} \times \text{hauteur}$$

$$A = bh$$

1.

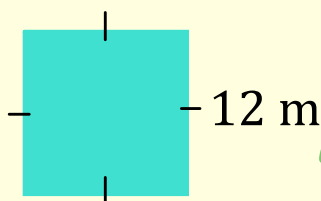


$$A = bh$$

$$A = (5\text{cm})(2\text{cm})$$

$$A = 10\text{cm}^2$$

2.



$$A = bh$$

$$A = (12\text{m})(12\text{m})$$

$$A = 144\text{m}^2$$

3.

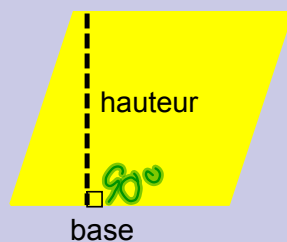


$$A = 16\text{cm}^2$$

Quelles sont les dimensions du rectangle?

$$16 = \begin{array}{l} (2)(8) \\ (8)(2) \\ (4)(4) \\ (16)(1) \\ (1)(16) \end{array}$$

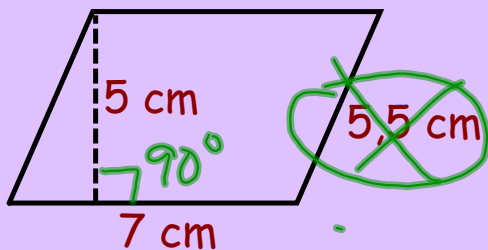
Tout coté d'un parallélogramme est un **base**.  
La **hauteur** d'un parallélogramme est la longueur d'un segment de droite qui relie les cotés parallèles et qui est **perpendiculaire** à la base.



Rappelle-toi qu'un rectangle et un carré sont des parallélogrammes. L'aire est une surface, dont on l'exprime en unités carrées (exemple:  $\text{cm}^2$ ).

## L'aire d'un parallélogramme

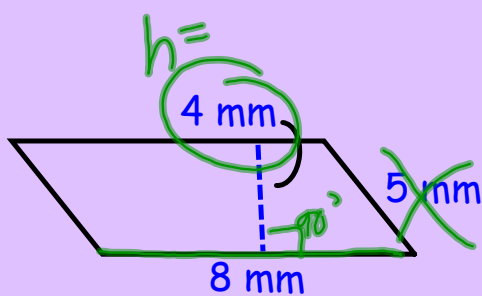
Ex.



Aire = base x hauteur

$$\begin{aligned} A &= bh \\ &= (7 \text{ cm})(5 \text{ cm}) \\ &= 35 \text{ cm}^2 \end{aligned}$$

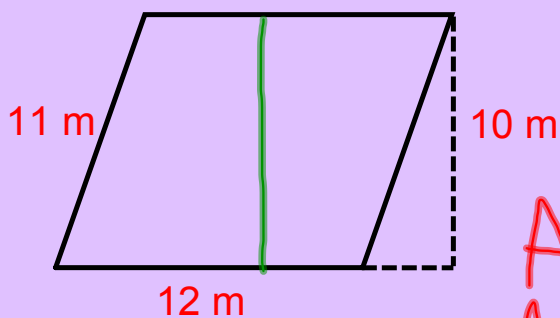
1.



$h$  fait  $90^\circ$   
avec la base.

$$\begin{aligned} A &= bh \\ A &= (4 \text{ mm})(8 \text{ mm}) \\ A &= 32 \text{ mm}^2 \end{aligned}$$

2.

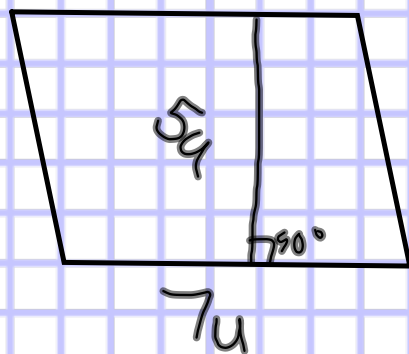


Trouvez l'aire du  
parallelogramme.

$$\begin{aligned} A &= Bh \\ A &= (12 \text{ m})(10 \text{ m}) \\ A &= 120 \text{ m}^2 \end{aligned}$$

Calcule l'aire de chaque parallélogramme:

A)



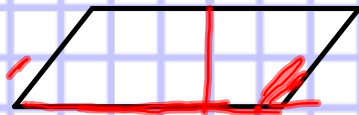
$$\text{base} = 7u$$
$$\text{hauteur} = 5u$$

$$A = bh$$

$$A = (7u)(5u)$$

$$A = 35u^2$$

B)

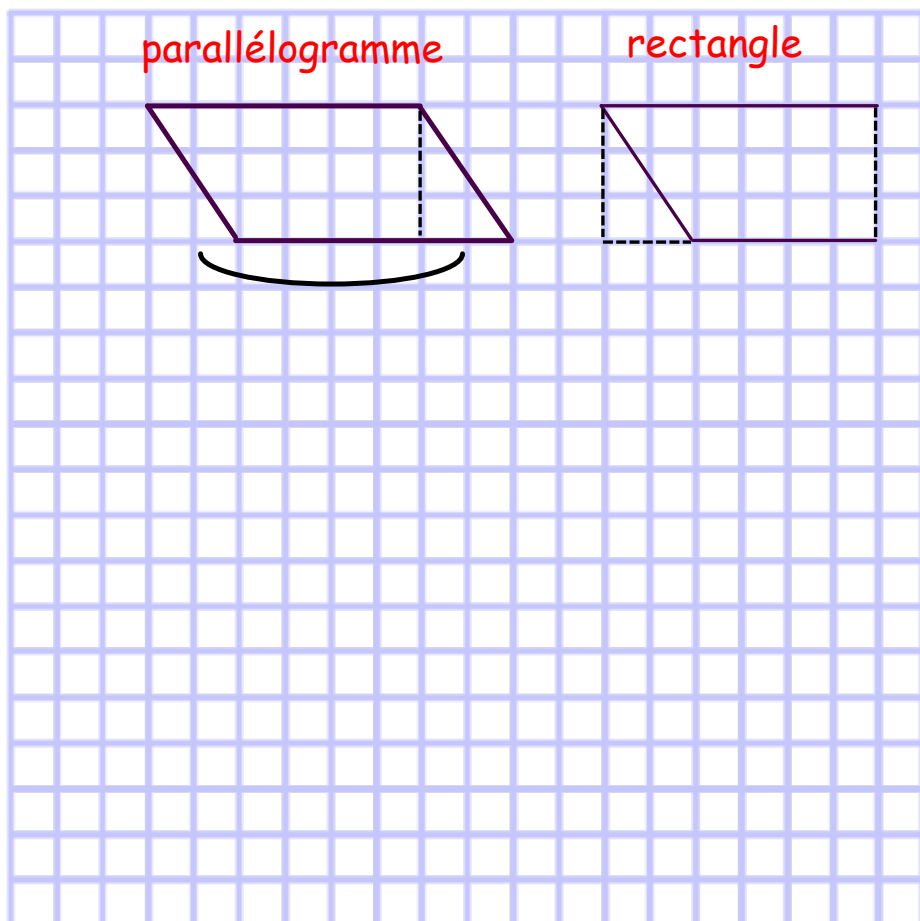


$$\text{base} = 5.5u$$
$$\text{hauteur} = 2u$$

$$A = bh$$

$$A = (5.5u)(2u)$$
$$A = 11u^2$$

Quand un parallélogramme n'est pas un rectangle, tu peux le "couper" et déplacer les morceaux pour former un rectangle. Voici un façon de le faire:





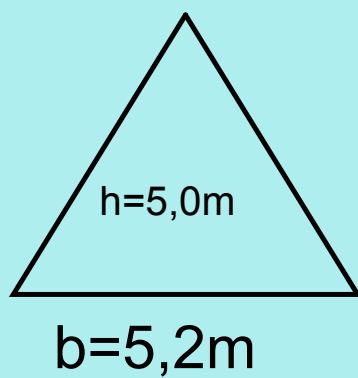
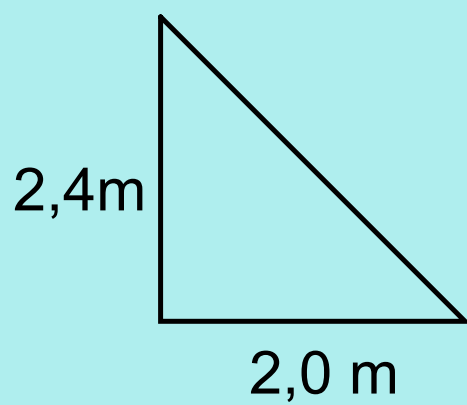
## L'aire d'un triangle

Si tu traces une diagonale dans un parallélogramme, tu obtiens deux triangles congruents.

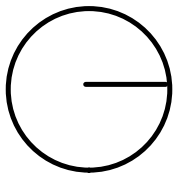
Des triangles congruents ont la même aire.

Ainsi, l'aire d'un triangle égale  $\frac{1}{2}$  de l'aire du parallélogramme.

## L'aire d'un triangle

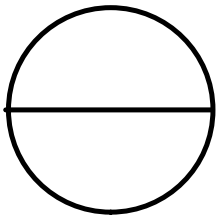


## l'aire d'un cercle

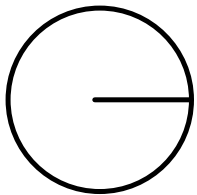


$r = 2\text{cm}$

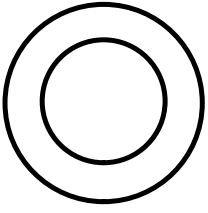
Calcule l'aire de chaque cercle.



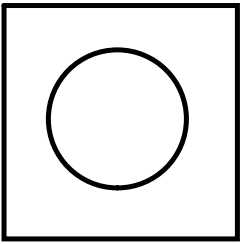
$d = 5 \text{ cm}$



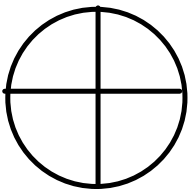
$r = 10 \text{ cm}$



· ~ (m)⁻



$$100 - 78,5 = 21,5 \text{ cm}^2$$



$r=6\text{cm}$



