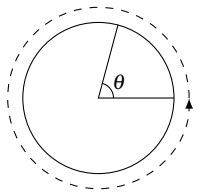


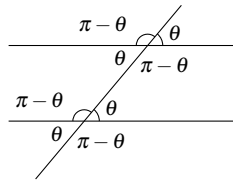
# Formulaire de géométrie

## Angles

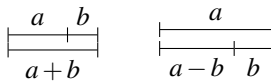


$$1 \text{ tour} = 2\pi \text{ rad} = \tau \text{ rad} \\ = 360^\circ = 400 \text{ grad} = 4 \text{ droits}$$

$$\frac{\theta_{\text{tours}}}{1} = \frac{\theta_{\text{rad}}}{2\pi} = \frac{\theta_{\text{deg}}}{360} = \text{etc.}$$

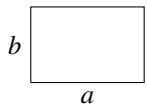


## Longueurs

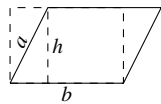


## Périmètre et aires des figures de base

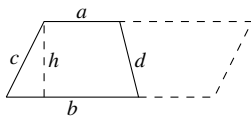
### Rectangles et aires dérivées



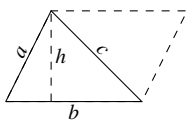
Périmètre  $p = 2a + 2b$   
Aire  $A = ab$



Périmètre  $p = 2a + 2b$   
Aire  $A = bh$

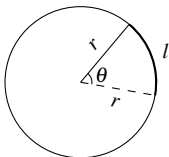


Périmètre  $p = 2a + 2b$   
Aire  $A = \frac{(a+b)h}{2}$



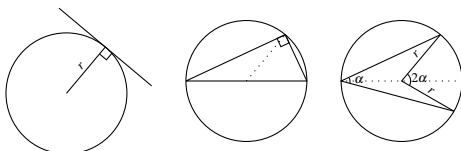
Périmètre  $a + b + c$  Aire  $\frac{bh}{2}$   
Aire (Héron)  $\sqrt{p(p-a)(p-b)(p-c)}$   
où  $p =$  demi périmètre

## Cercles

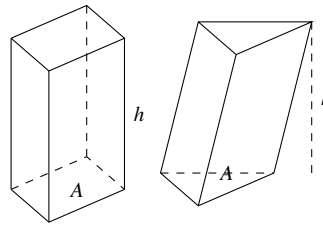


Circonférence  $C = 2\pi r$   
Aire  $A = \pi r^2$   
Longueur d'arc  $l = \theta r$   
Aire secteur  $A_s = \frac{\theta r^2}{2}$

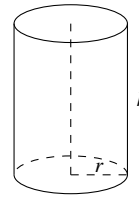
## Angles et cercles



## Prismes et cylindres

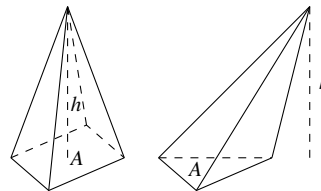


Pour toutes bases  
Pour obliques aussi  
Surface base :  $B$   
Volume  $V = Bh$

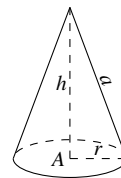


Circonférence base  $C = 2\pi r$   
Surface base  $A = \pi r^2$   
Surface latérale  $S = Ch$   
Volume  $V = Ah$

## Pyramides et cônes

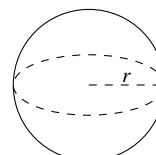


Pour toutes bases  
Pour obliques aussi  
Volume  $V = \frac{\text{Vol. du prisme de base } B}{3}$



Circonférence base  $C = 2\pi r$   
Surface base  $A = \pi r^2$   
Surface latérale  $S = \frac{Ca}{2}$   
Volume  $V = \frac{Ah}{3}$

## Sphère

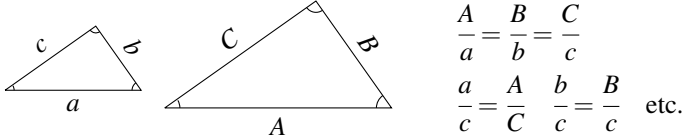


Surface  $S = 4\pi r^2$   
Volume  $V = 4\pi \frac{r^3}{3}$

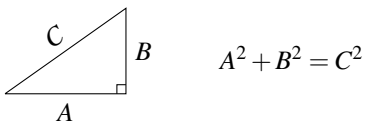
# Trigonométrie de base

## Similitude

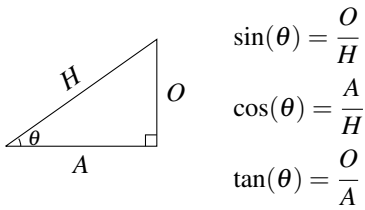
Dans deux triangles semblables, les proportions des côtés correspondants sont toujours les mêmes.



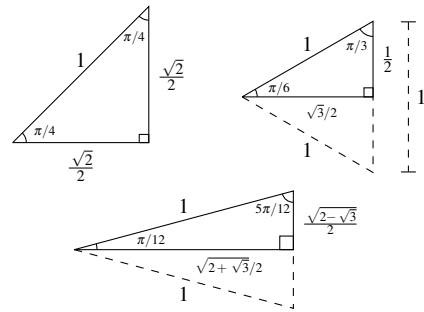
## Thm. de Pythagore



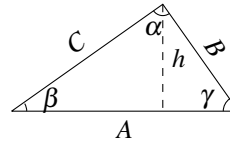
## Rapports trigonométriques



## Triangles remarquables

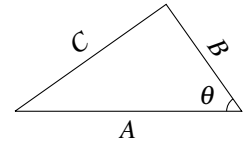


## Loi des sin



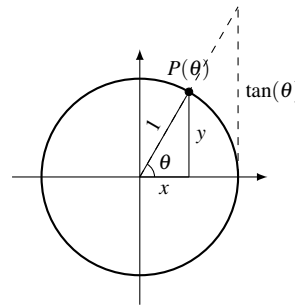
$$\frac{A}{\sin(\alpha)} = \frac{B}{\sin(\beta)} = \frac{C}{\sin(\gamma)}$$

## Loi des cos



$$C^2 = A^2 + B^2 - 2AB \cos(\theta)$$

## Cercle trigonométrique



$$\cos(\theta) = x$$

$$\sin(\theta) = y$$

$$\cos^2(\theta) + \sin^2(\theta) = 1$$

$$\tan(\theta) = \frac{y}{x} = \frac{\sin(\theta)}{\cos(\theta)} = \frac{\tan(\theta)}{1}$$