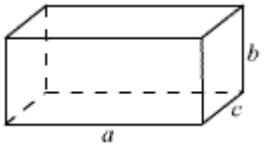
AIRES ET VOLUMES

Mémo

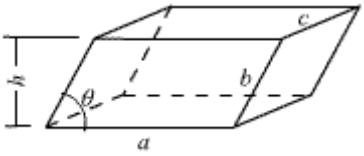
Parallélépipède rectangle (pavé droit)



Volume = abc

Aire = $2(ab+ac+bc)$

Parallélépipède non-rectangle.



Volume = ach

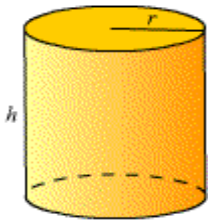
Aire = $2(ah + bc + ca)$

Sphère

Volume = $\frac{4}{3}\pi r^3$

Aire = $4\pi r^2$

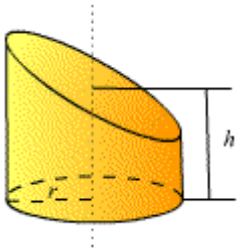
Cylindre droit



Volume = $\pi r^2 h$

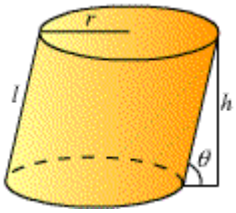
Aire = $2\pi r h$

Tronc de cylindre



Volume = $\frac{1}{3}\pi r^2 h$

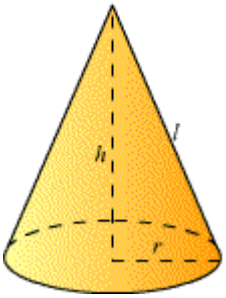
Cylindre non droit



Volume = $\pi r^2 h$
= $\pi r^2 l \sin\theta$

Aire latérale = $2\pi r l = \frac{2\pi r h}{\sin\theta}$

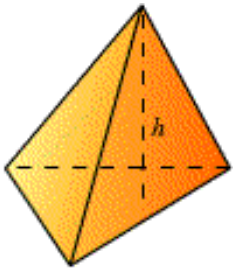
Cône droit



Volume = $\pi r l$

Aire latérale = $\frac{1}{3}Ah$
= $\pi r\sqrt{r^2+h^2}$

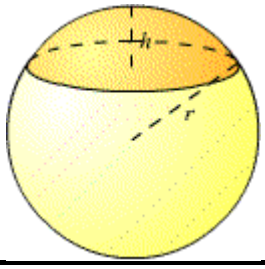
Pyramide



A désigne l'aire de la base.

Volume = $\frac{1}{3}Ah$

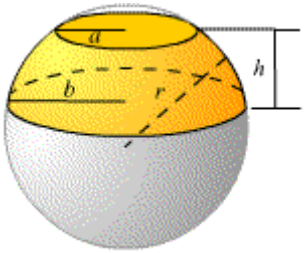
Calotte sphérique



Volume = $\frac{1}{3}\pi r^2(3r-h)$

Aire = $2\pi r h$

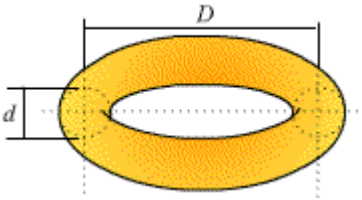
Zone sphérique



Volume = $\frac{\pi h}{6}\left(3a^2+3b^2+h^2\right)$

Aire latérale = $2\pi r h$

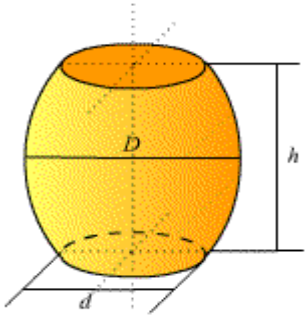
Tore



Volume = $\frac{D\pi^2 d^2}{4}$

Aire = $Dd\pi^2$

Tonneau



Volume = $\frac{h\pi}{12}\left(2D^2+d^2\right)$