

CHAPITRE 13

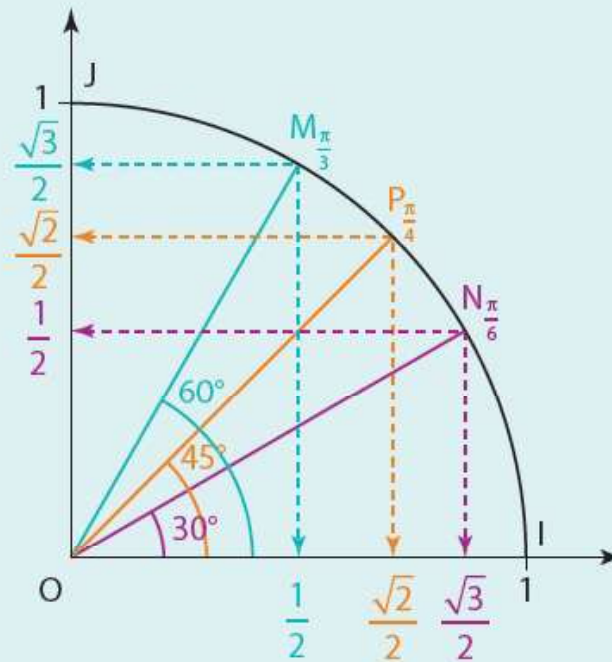
FONCTIONS COSINUS ET SINUS

Rappel

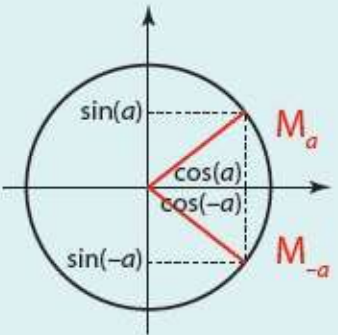
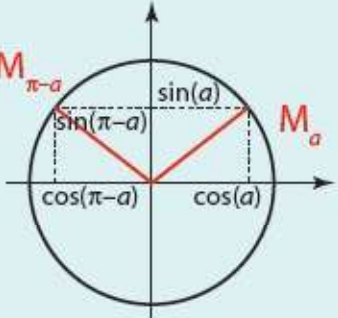
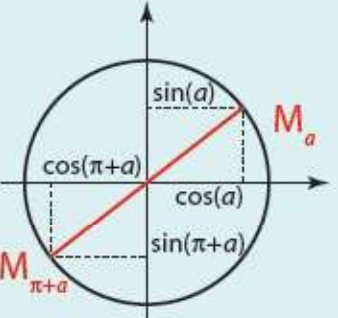
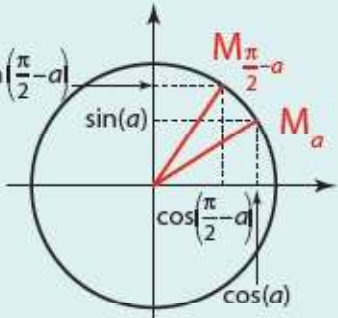
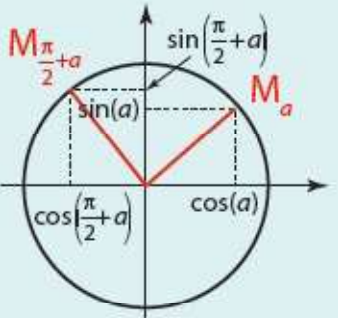
Propriété Valeurs remarquables

Soit M_x un point du cercle trigonométrique, image d'un réel x . Alors :

Angle \widehat{IOM}	0°	30°	45°	60°	90°
Réel x	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
$\cos x$ $\cos \widehat{IOM}$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
$\sin x$ $\sin \widehat{IOM}$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1



Par différentes symétries, on obtient les formules suivantes.

	$\cos(-a) = \cos(a)$ $\sin(-a) = -\sin(a)$	$a \in \mathbb{R}$	
	$\cos(\pi - a) = -\cos(a)$ $\sin(\pi - a) = \sin(a)$		$\cos(\pi + a) = -\cos(a)$ $\sin(\pi + a) = -\sin(a)$
	$\cos\left(\frac{\pi}{2} - a\right) = \sin(a)$ $\sin\left(\frac{\pi}{2} - a\right) = \cos(a)$		$\cos\left(\frac{\pi}{2} + a\right) = -\sin(a)$ $\sin\left(\frac{\pi}{2} + a\right) = \cos(a)$