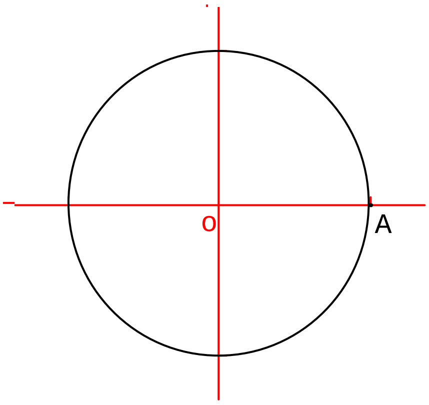
TD N°….: EQUATIONS TRIGONOMETRIQUES ET ANGLES REMA RQUABLES.

NOM : …………………………… PRENOM : ……………………

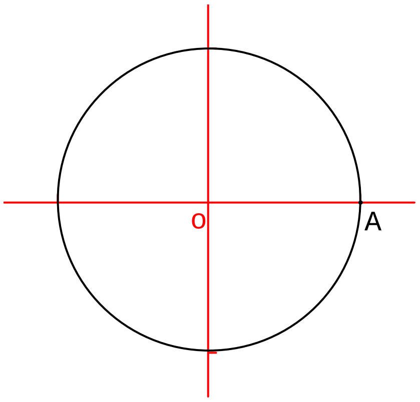
I) Angles remarquables :

Exercice n°1 : Dans chacun des cas suivants, déterminer à l'aide du cercle trigonométrique un réel θ solution du système donné.

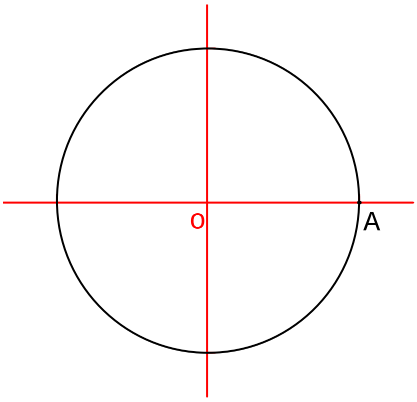
1.a $\cos\theta = \frac{1}{2}$ *et* $\sin\theta = \frac{\sqrt{3}}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$

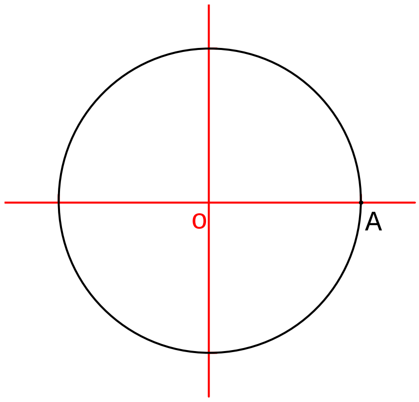


b. $\cos\theta = -\frac{1}{2}$ *et* $\sin\theta = \frac{\sqrt{3}}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$

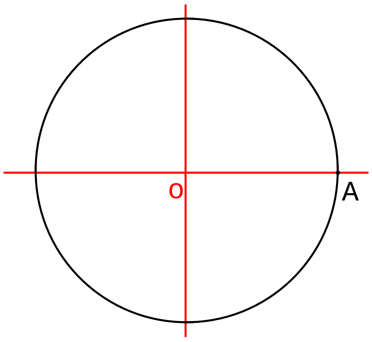


c. $\cos\theta = \frac{1}{2}$ *et* $\sin\theta = -\frac{\sqrt{3}}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$

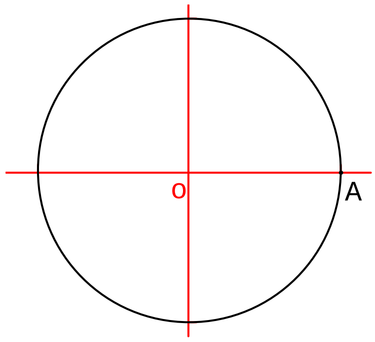




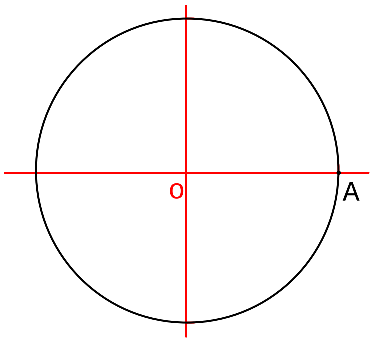
2.a. $\cos\theta = \frac{\sqrt{3}}{2}$ *et* $\sin\theta = \frac{1}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$



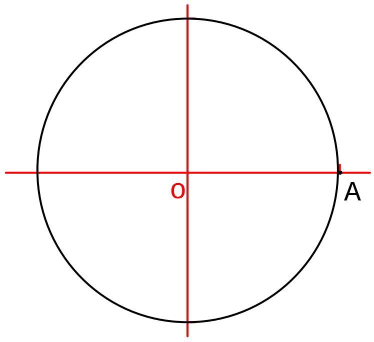
b. $\cos\theta = -\frac{\sqrt{3}}{2}$ *et* $\sin\theta = \frac{1}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$



c. $\cos\theta = \frac{\sqrt{3}}{2}$ *et* $\sin\theta = -\frac{1}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$

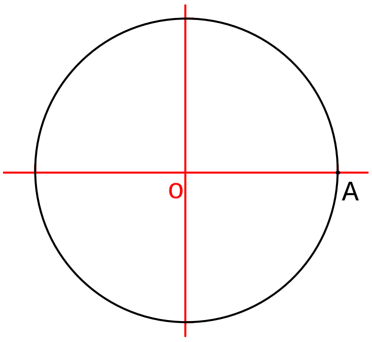


d. $\cos\theta = -\frac{\sqrt{3}}{2}$ *et* $\sin\theta = -\frac{1}{2}$, θ = ……………......…………..k$\in\mathbb{Z}$

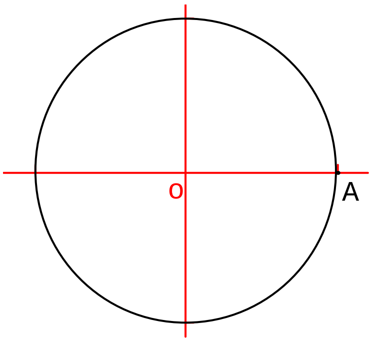


TD N°….: EQUATIONS TRIGONOMETRIQUES ET ANGLES REMARQUABLES.

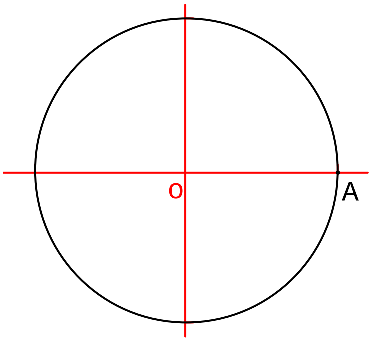
3.a. $\cos\theta = \dfrac{\sqrt{2}}{2}$ *et* $\sin\theta = \dfrac{\sqrt{2}}{2}$, θ = ……………......……………..k∈ℤ



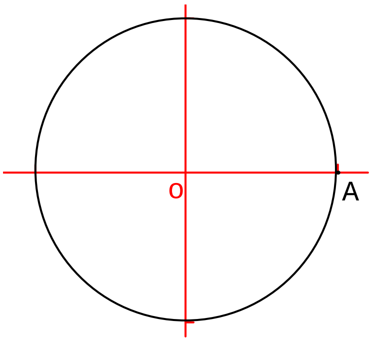
b. $\cos\theta = -\dfrac{\sqrt{2}}{2}$ *et* $\sin\theta = \dfrac{\sqrt{2}}{2}$, θ = ……………......……………..k∈ℤ



c. $\cos\theta = \dfrac{\sqrt{2}}{2}$ *et* $\sin\theta = -\dfrac{\sqrt{2}}{2}$, θ = ……………......……………..k∈ℤ



d. $\cos\theta = -\dfrac{\sqrt{2}}{2}$ *et* $\sin\theta = -\dfrac{\sqrt{2}}{2}$, θ = ……………......……………..k∈ℤ

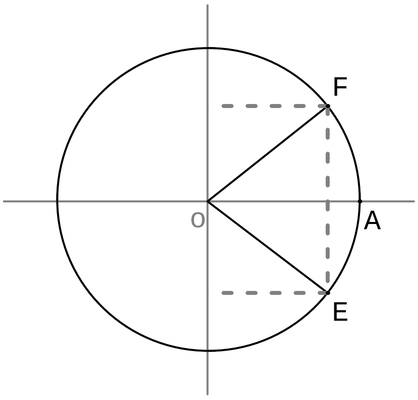


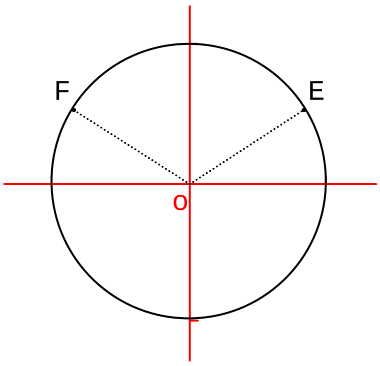
Exercice n°2 : 1. Déterminer l'ensemble des solutions appartenant à l'intervalle $[0;4\pi]$ de l'équation $\sin x = \dfrac{\sqrt{3}}{2}$

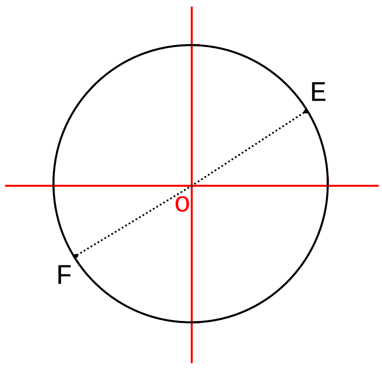
2. Déterminer l'ensemble des solutions appartenant à l'intervalle $[-\pi;2\pi]$ de l'équation $\cos x = -\dfrac{\sqrt{3}}{2}$

II) Angles associés :

Exercice n°3 : Dans chacun des cas suivants, exprimer à l'aide du cercle trigonométrique les expressions données en fonction de cos x ou de sin x.







cos (-x) =

sin (-x) =

cos (π - x) =

sin (π - x) =

cos(π+x) =

sin(π+x) =