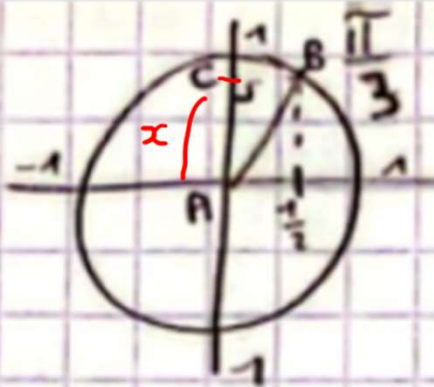


# Corrigé du DM2

## 1FTP

Soit

$$x = \sin \frac{\pi}{3} = ? \frac{\sqrt{3}}{2}$$



$$\text{Pythagore} : AC^2 + CB^2 = AB^2$$

$$\Leftrightarrow x^2 + \left(\frac{1}{2}\right)^2 = 1^2$$

$$\Leftrightarrow x^2 = 1^2 - \frac{1}{4}$$

$$\Leftrightarrow x^2 = \frac{3}{4}$$

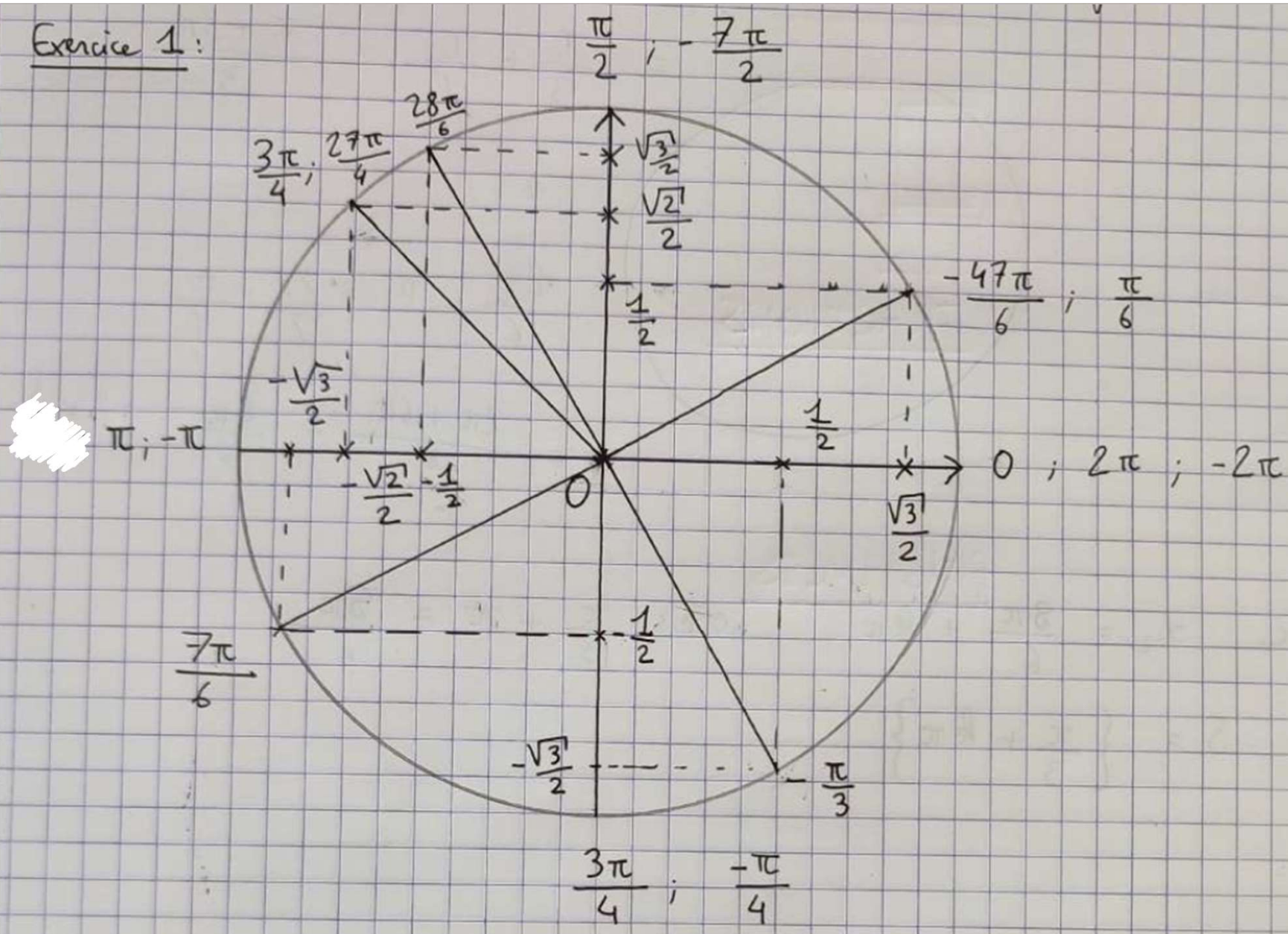
$$\Leftrightarrow \begin{matrix} \text{Car } x > 0 \\ x = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{\sqrt{4}} = \boxed{\frac{\sqrt{3}}{2}} \end{matrix}$$

$$\text{Donc } \sin \frac{\pi}{3} = \frac{\sqrt{3}}{2}$$

**Exercice 1** Compléter le tableau suivant : ( $k$  est un entier relatif :  $k \in \mathbb{Z}$ )

$\theta$	$-2\pi ;$ $8\pi ;$ $2k\pi$	$\pi ; -\pi ;$ $7\pi ; -5\pi$ .....	$\frac{7\pi}{6}$	$-\frac{\pi}{3}$	$-\frac{7\pi}{2}$	$\frac{27\pi}{4}$	$-\frac{47\pi}{6}$	$\frac{15\pi}{3}$	$\frac{28\pi}{6}$	$k\pi$
$\sin \theta$	0	0	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$	1	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$\frac{\sqrt{3}}{2}$	0
$\cos \theta$	1	-1	$-\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	0	$-\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	-1	$-\frac{1}{2}$	$(-1)^k$
$\tan \theta$	0	0	$\frac{\sqrt{3}}{3}$	$-\sqrt{3}$	<del>0</del> <i>impossible</i>	-1	$\frac{\sqrt{3}}{3}$	0	$-\sqrt{3}$	0

Exercise 1:



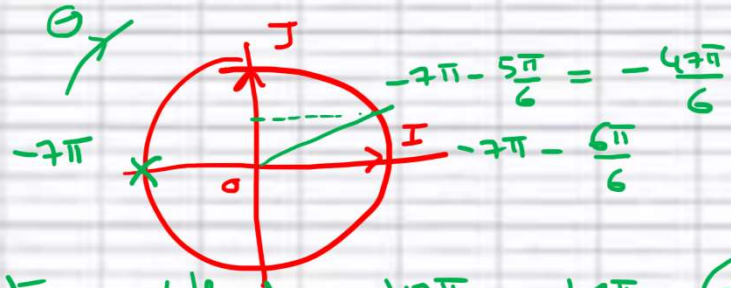
$$* \frac{27\pi}{4} = \frac{24\pi}{4} + \frac{3\pi}{4}$$

$$* \frac{-47\pi}{6} = \frac{-42\pi}{6} - \frac{5\pi}{6}$$

$\underbrace{\hspace{2cm}}_{-7\pi}$

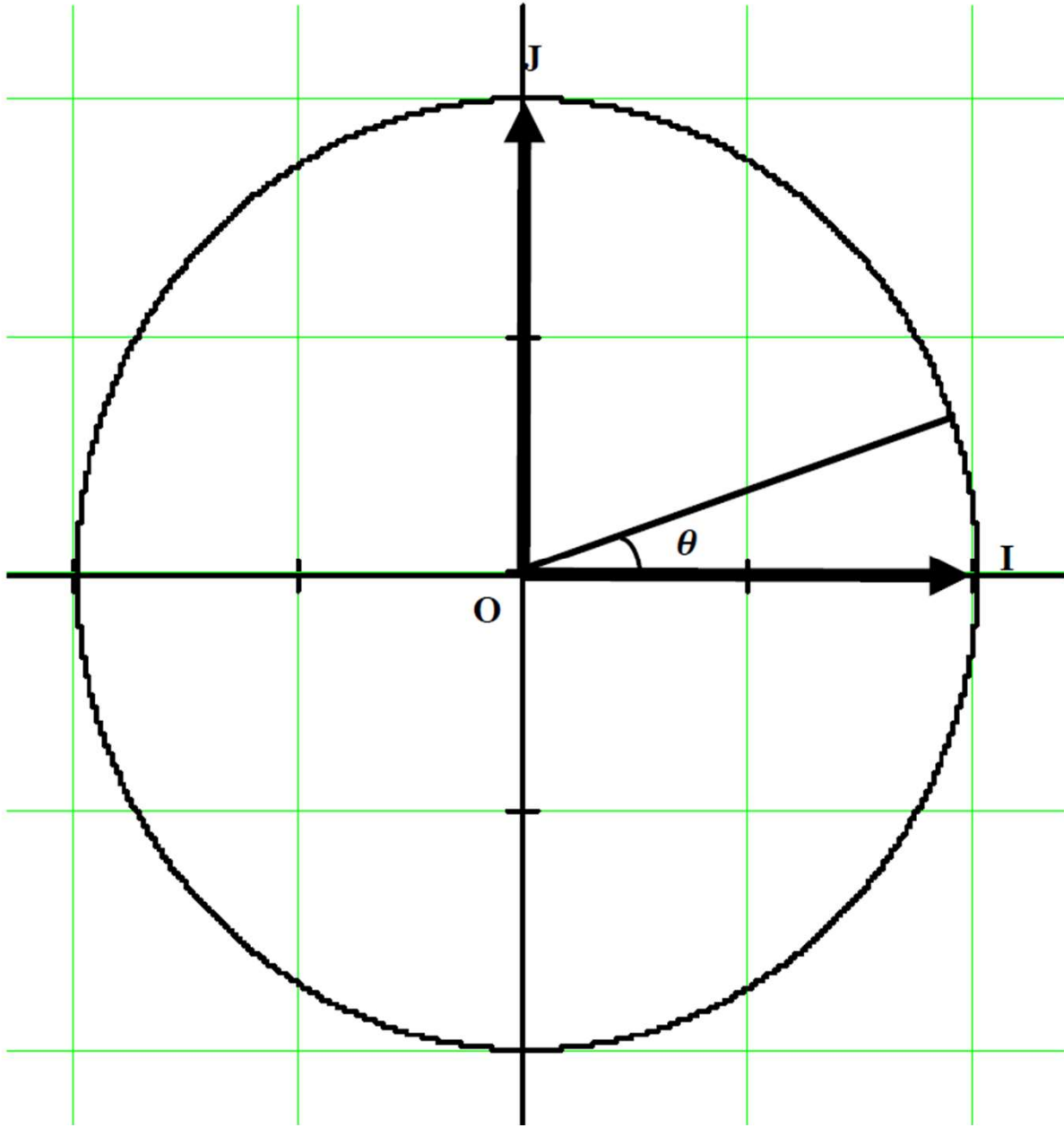
$$* \frac{15\pi}{3} = 5\pi$$

$$* \frac{28\pi}{6} \text{ simplification } \frac{14\pi}{3} \quad \frac{14\pi}{3} = \frac{12\pi}{3} + \frac{2\pi}{3}$$



Autre méthode:  $-\frac{47\pi}{6} = \frac{-48\pi}{6} + \frac{\pi}{6}$

$\underbrace{\hspace{2cm}}_{-8\pi}$



A series of ten horizontal blue dotted lines for writing.