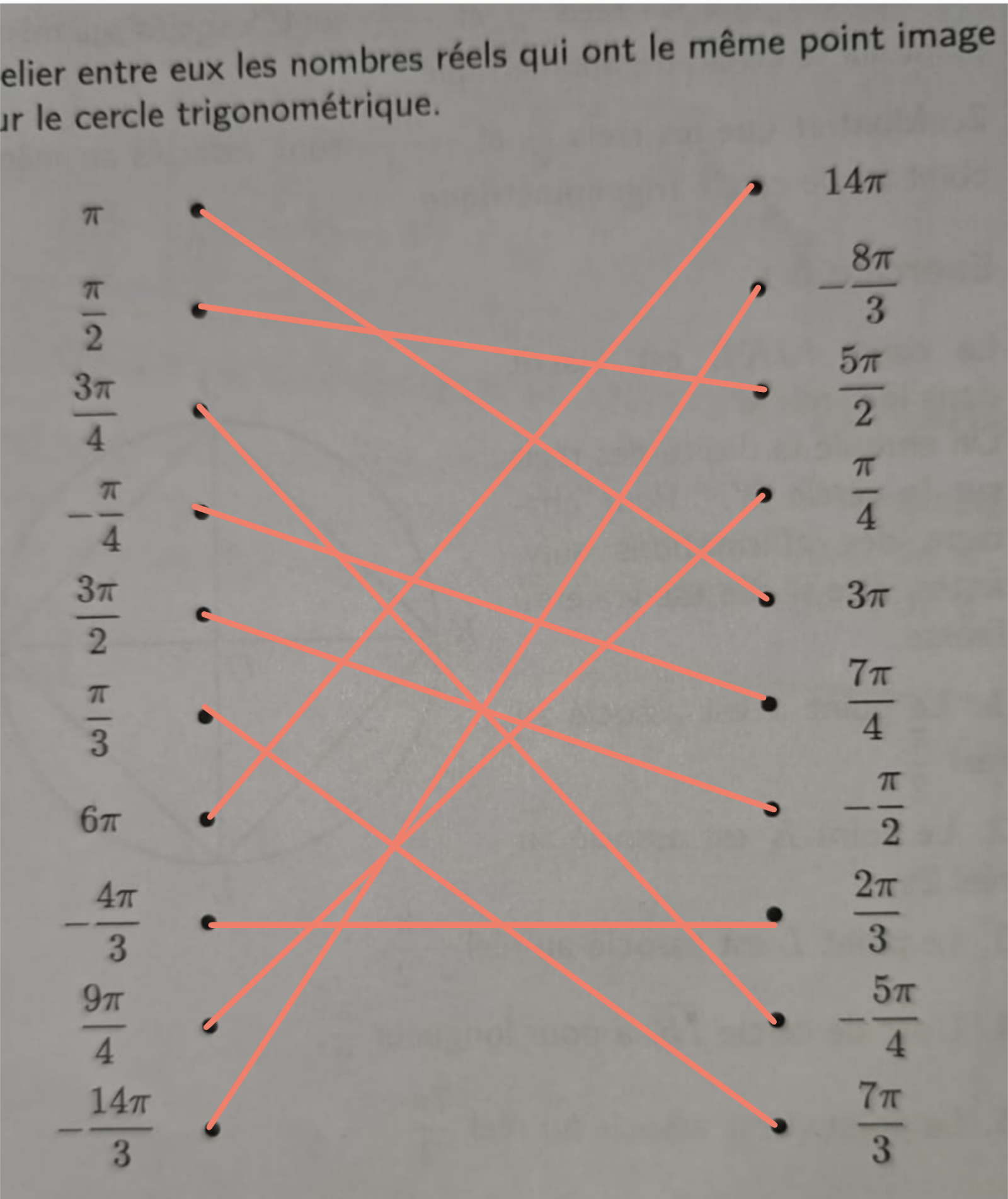
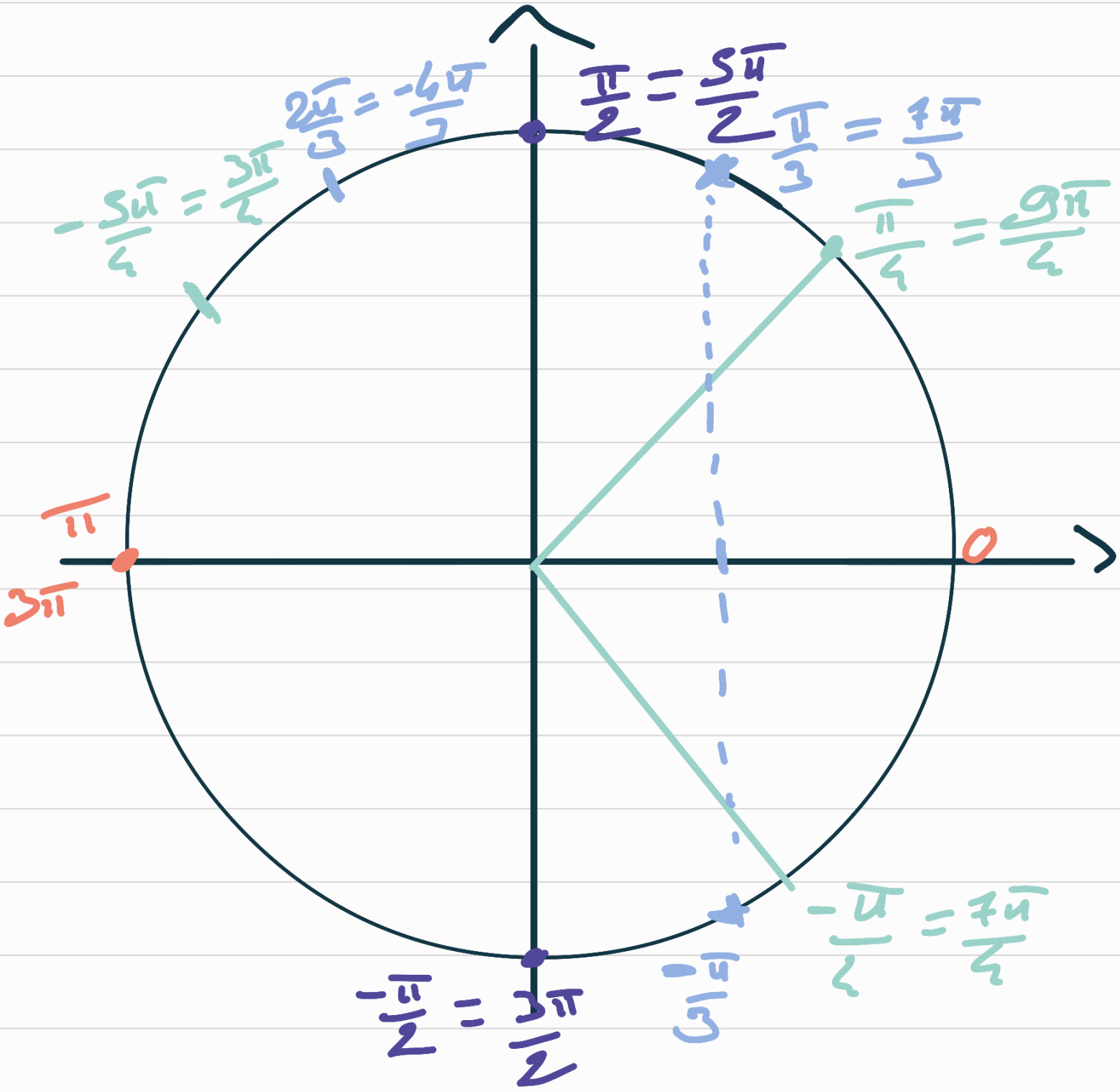
Trigonométrie

elier entre eux les nombres réels qui ont le même point image
ur le cercle trigonométrique.




$\frac{\pi}{2} = \frac{5\pi}{2}$
$\frac{2\pi}{3} = -\frac{4\pi}{3}$
$\frac{\pi}{3} = \frac{7\pi}{3}$
$-\frac{5\pi}{4} = \frac{3\pi}{4}$
$\frac{\pi}{4} = \frac{9\pi}{4}$
π
3π
0
$-\frac{\pi}{2} = \frac{3\pi}{2}$
$-\frac{\pi}{3}$
$-\frac{\pi}{4} = \frac{7\pi}{4}$

3. Calculer le cosinus et le sinus des angles θ suivants:

a. $\theta = \frac{-\pi}{6}$.

b. $\theta = \frac{-\pi}{2}$.

c. $\theta = -\pi$.

d. $\theta = \frac{-4\pi}{3}$.

e. $\theta = \frac{5\pi}{6}$.

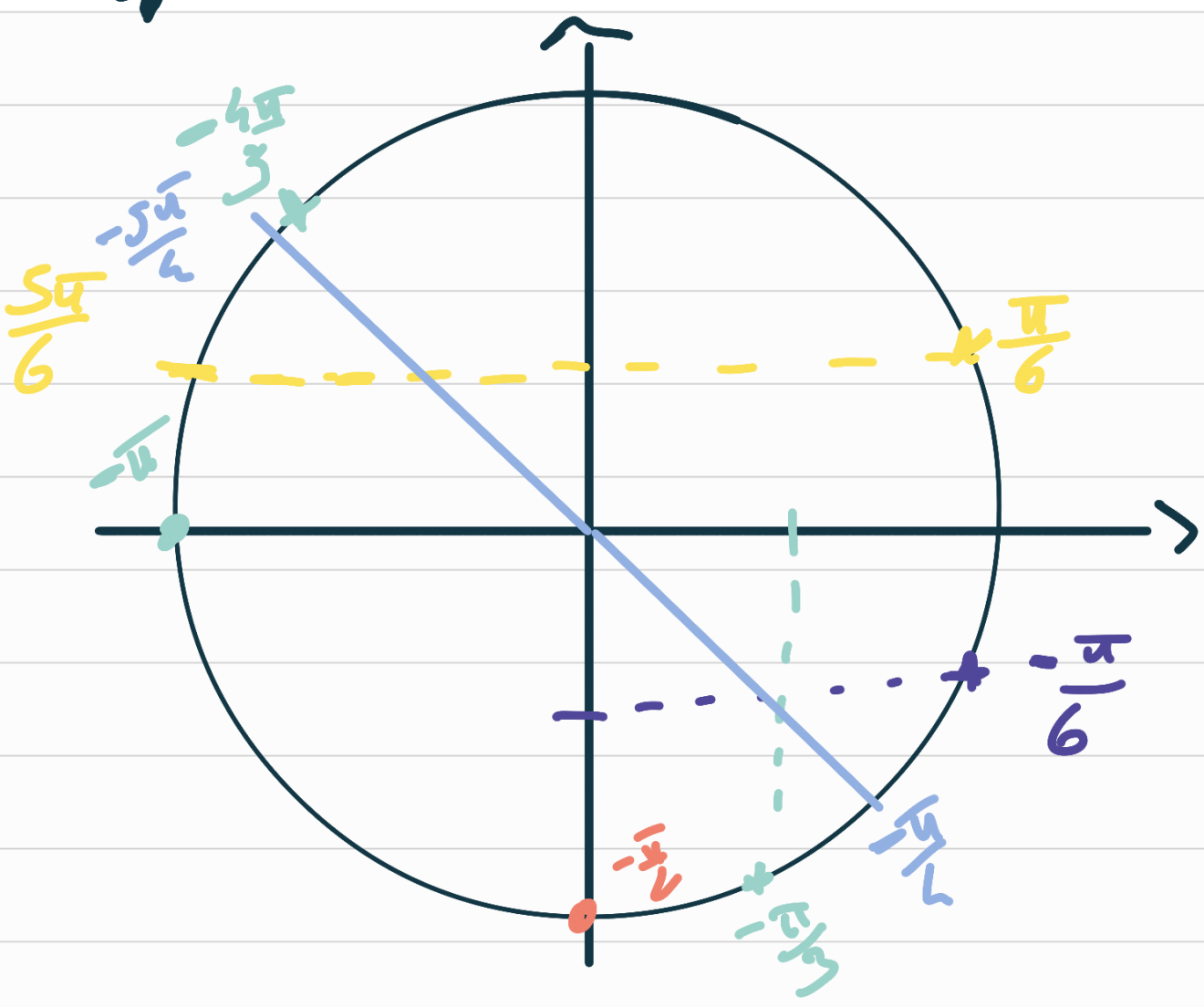
f. $\theta = \frac{-5\pi}{4}$.

e) $\cos\left(\frac{5\pi}{6}\right) = -\frac{\sqrt{3}}{2}$

$\sin\left(\frac{5\pi}{6}\right) = \frac{1}{2}$

f) $\cos\left(-\frac{5\pi}{4}\right) = -\frac{\sqrt{2}}{2}$

$\sin\left(-\frac{5\pi}{4}\right) = \frac{\sqrt{2}}{2}$



a) $\cos\left(\frac{-\pi}{6}\right) = \frac{\sqrt{3}}{2}$

$\sin\left(\frac{-\pi}{6}\right) = -\frac{1}{2}$

b) $\cos\left(\frac{-\pi}{2}\right) = 0$

$\sin\left(\frac{-\pi}{2}\right) = -1$

c) $\cos(-\pi) = -1$

$\sin(-\pi) = 0$

d) $\cos\left(\frac{-4\pi}{3}\right) = -\frac{1}{2}$

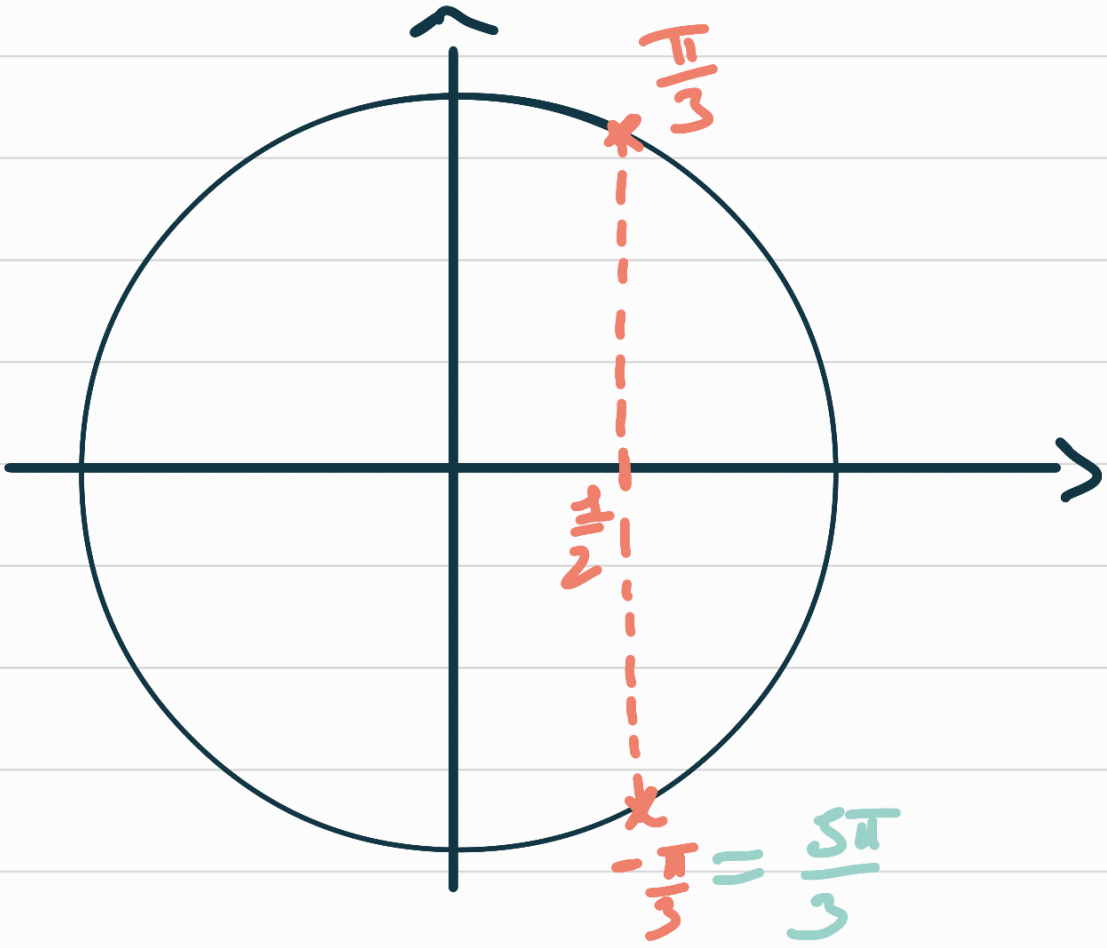
$\sin\left(\frac{-4\pi}{3}\right) = \frac{\sqrt{3}}{2}$

Exercice 12 corrigé disponible

Résoudre les équations et les inéquations suivantes :

1. Sur $[0;2\pi[$: $\cos x = \dfrac{1}{2}$
2. Sur $]-\pi;\pi]$: $\sin x = -\dfrac{\sqrt{2}}{2}$
3. Sur $[0;4\pi[$: $\cos x = \cos\dfrac{2\pi}{3}$
4. Sur $[0;2\pi[$: $\cos^2 x = \dfrac{3}{4}$
5. Sur $]-\pi;\pi]$: $6 - 12\cos x > 0$
6. Sur $]-\pi;2\pi]$: $\sin x \leqslant \dfrac{\sqrt{3}}{2}$
7. Sur $]-\pi;\pi]$: $2\sin^2 x - \sin x - 1 = 0$
8. Sur $]-\pi;\pi]$: $\sin 2x = \sin\dfrac{\pi}{4}$

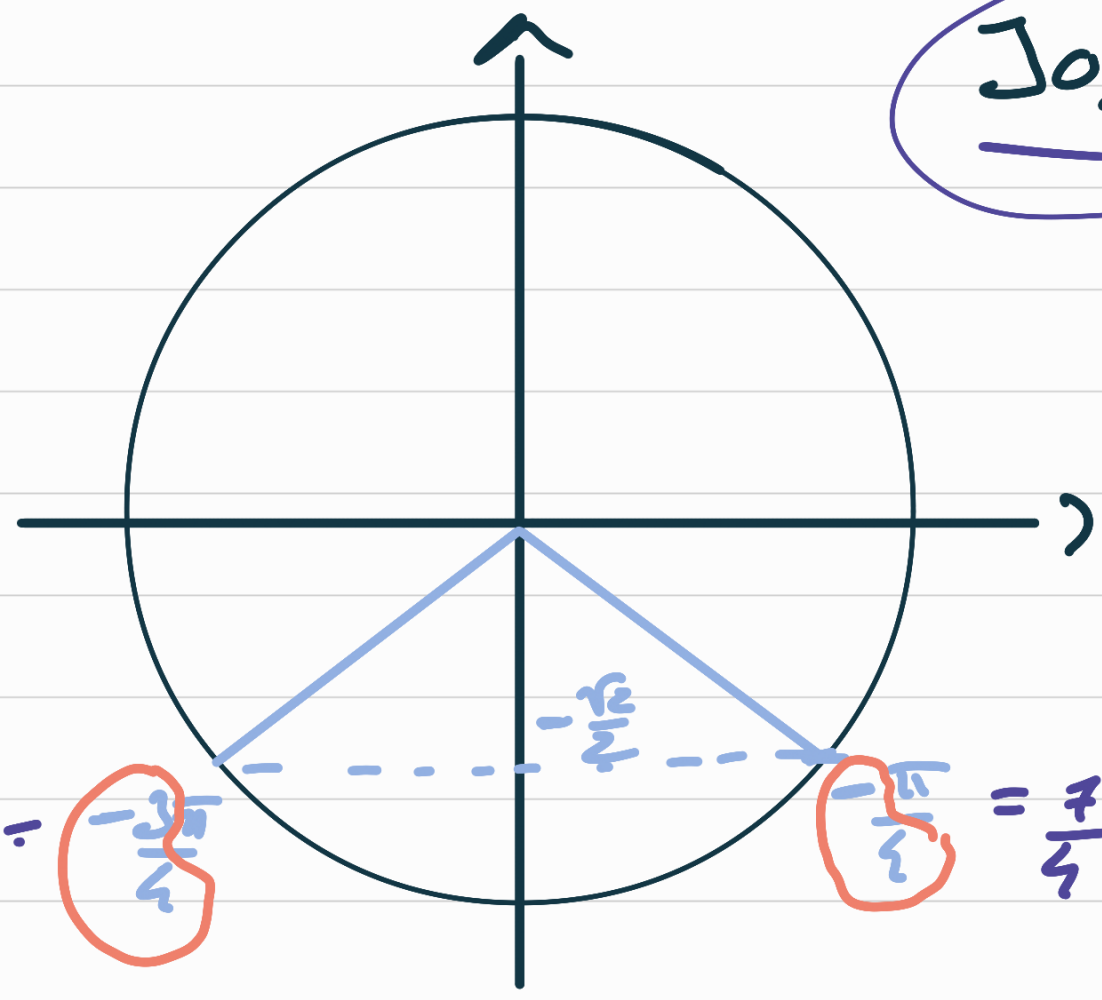
1) $\cos(x) = \frac{1}{2}$, $[0; 2\pi[$.



$S = \left\{ \frac{\pi}{3} ; \frac{5\pi}{3} \right\}$

e) $\sin(x) = -\frac{\sqrt{2}}{2}$, $]-\pi;\pi]$

$]0;2\pi]$



$S = \{-\frac{\pi}{4} ; -\frac{3\pi}{4}.\}$ $S = \{\frac{5\pi}{4}; \frac{7\pi}{4}\}$.