

Trigonométrie

$$\bullet \frac{27\pi}{4} = \frac{\overset{24}{8 \times 3\pi}}{4} + \frac{3\pi}{4}$$

$$= 2 \times 3\pi + \frac{3\pi}{4}$$

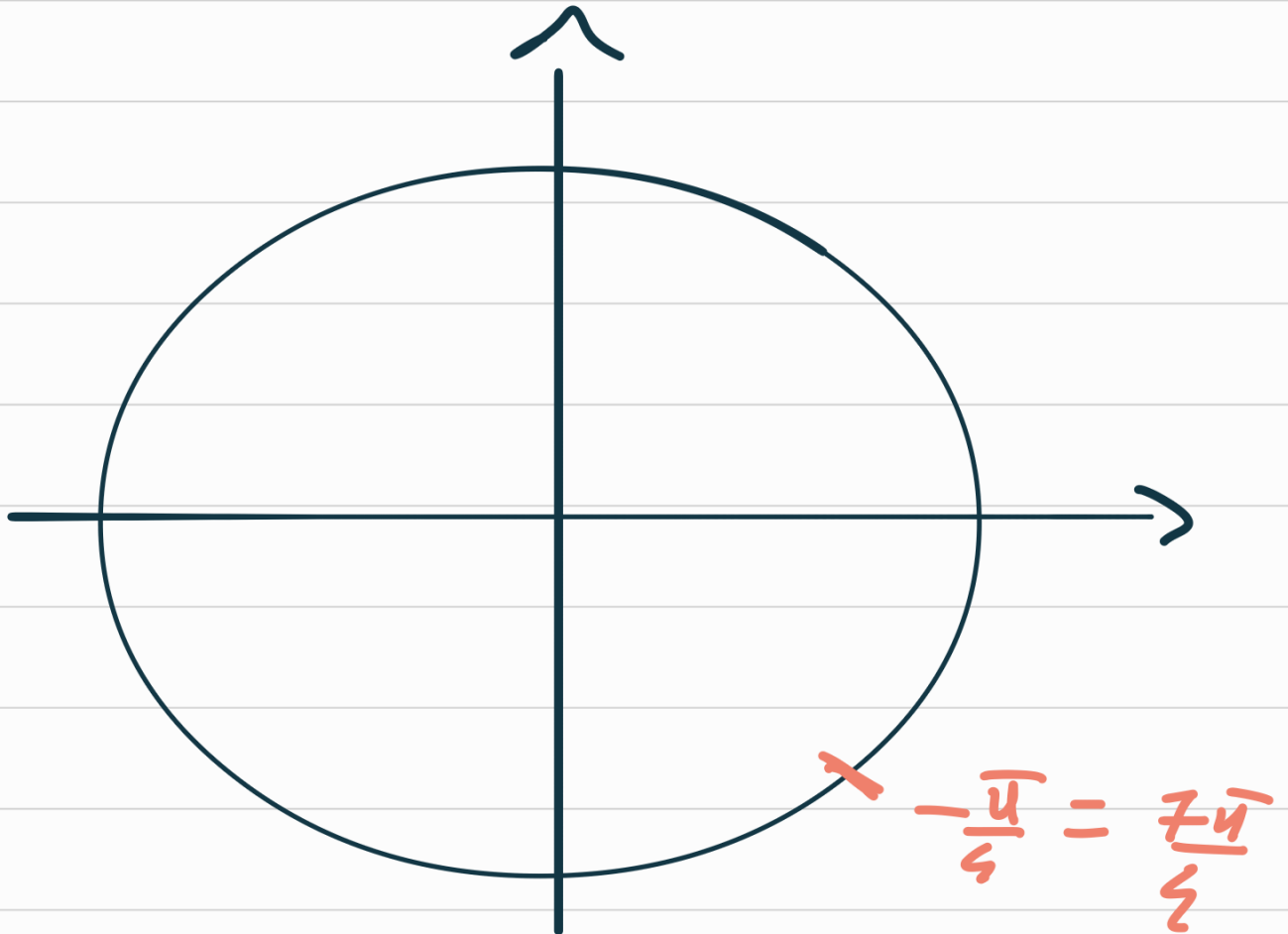
$$= \underbrace{3 \times (2\pi)}_{\text{compte pas}} + \frac{3\pi}{4}$$

donc P_a mesure principale
est $\frac{3\pi}{4}$.

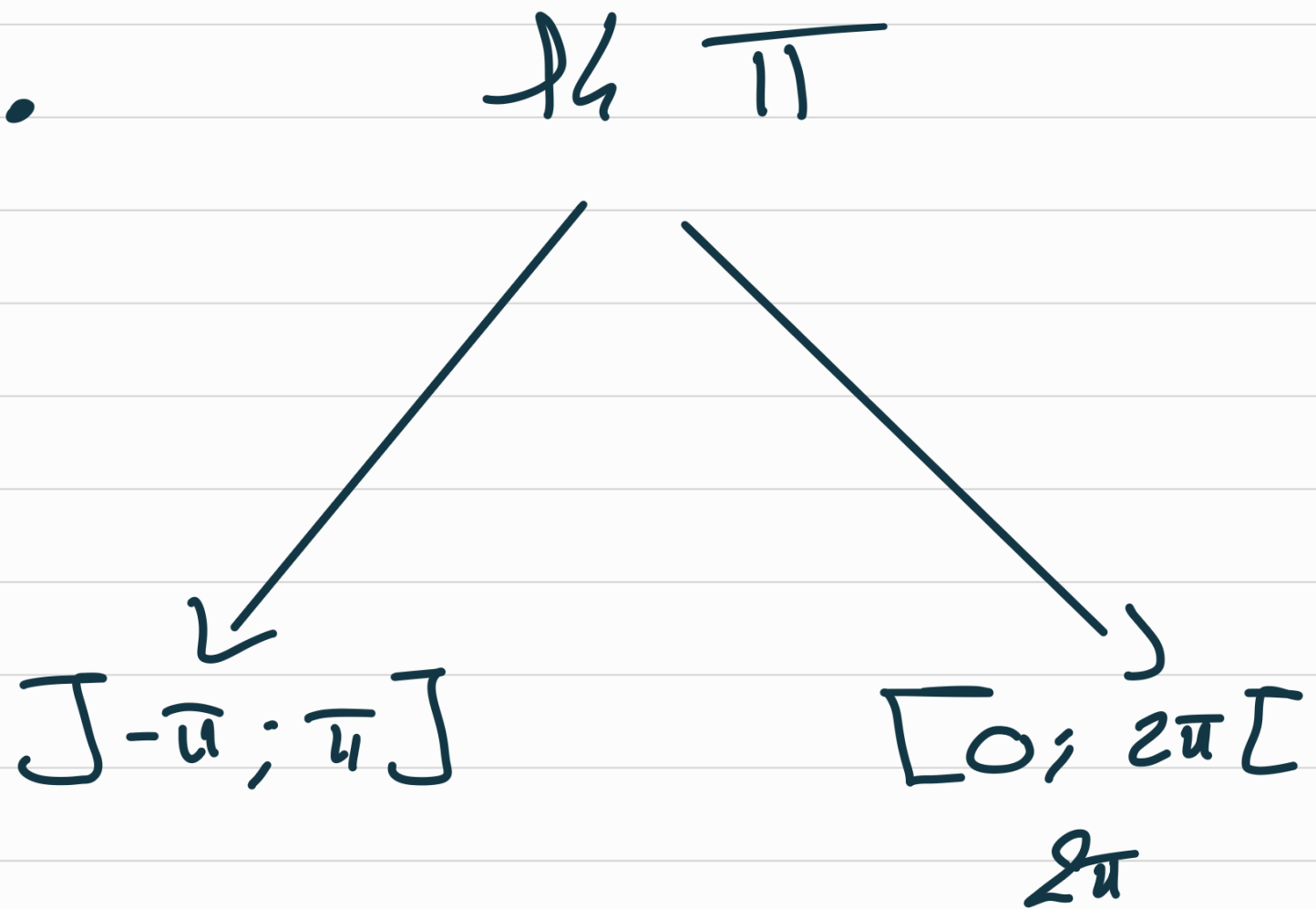
- $-\frac{\pi}{4} \in]-\pi; \pi]$
 $\xrightarrow{\quad} -\frac{1}{4} \in]-1; 1]$

|| Egalité

- $\frac{7\pi}{4} \in [0; 2\pi[$



exercice:



$$\begin{aligned} 14\pi &= 2 \times 7\pi = 7 \times (2\pi) \\ &= 2\pi = 0 \end{aligned}$$

$$\frac{-5\pi}{4}$$



$$[-\pi; \pi]$$

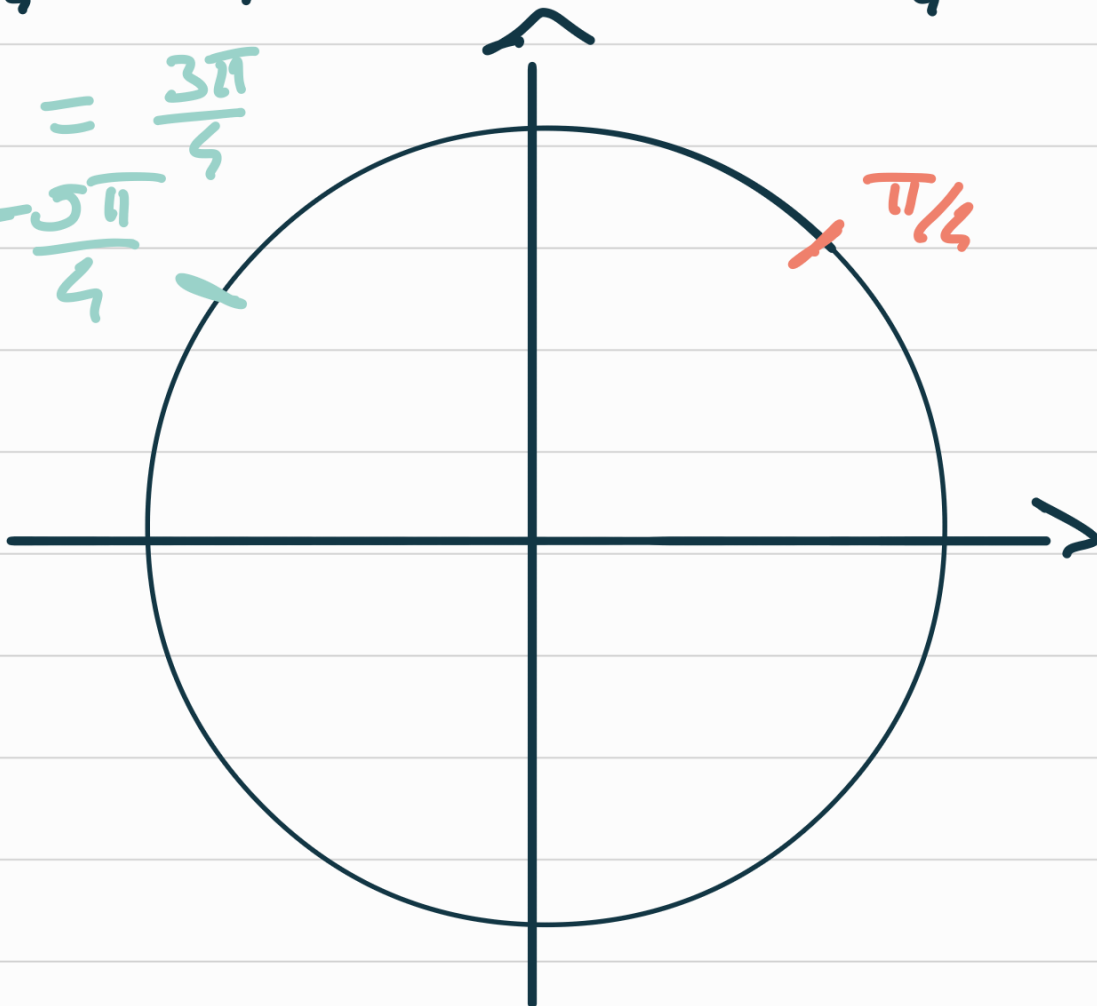
$$-\frac{5\pi}{4} = \frac{3\pi}{4}$$

$$= \frac{3\pi}{4}$$

$$-\frac{5\pi}{4}$$

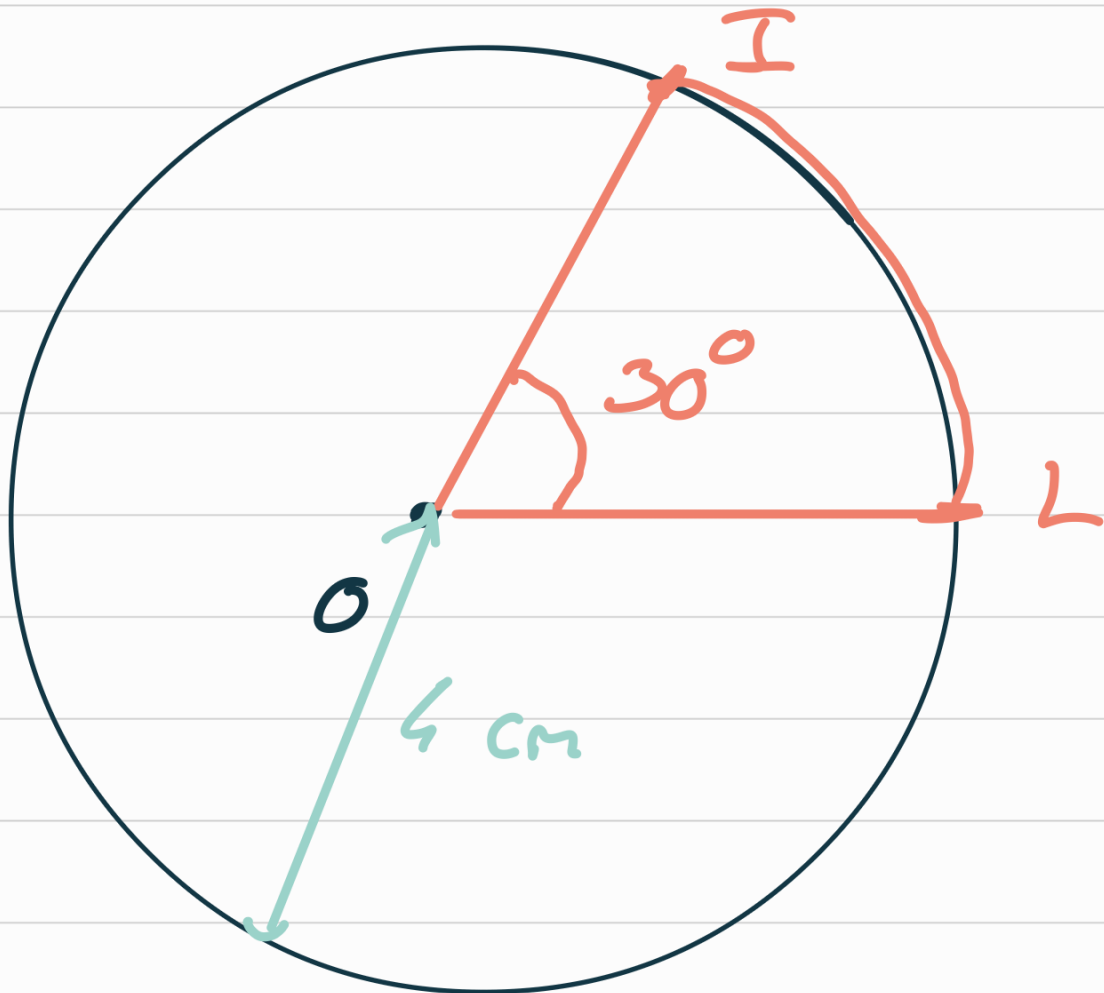
$$[0; 2\pi[$$

$$-\frac{5\pi}{4} = \frac{3\pi}{4}$$



$$\Rightarrow L = \overset{\text{rayon}}{r} \times \frac{\pi \times a}{180} \quad \swarrow \text{angle}$$

Calcule la longueur de l'arc de cercle tel que :



$$L = \frac{4 \times \pi \times 30}{180} = \frac{2\pi}{3} \text{ cm}$$

$$L = 40 \quad a = 30$$

↪ calculate r :

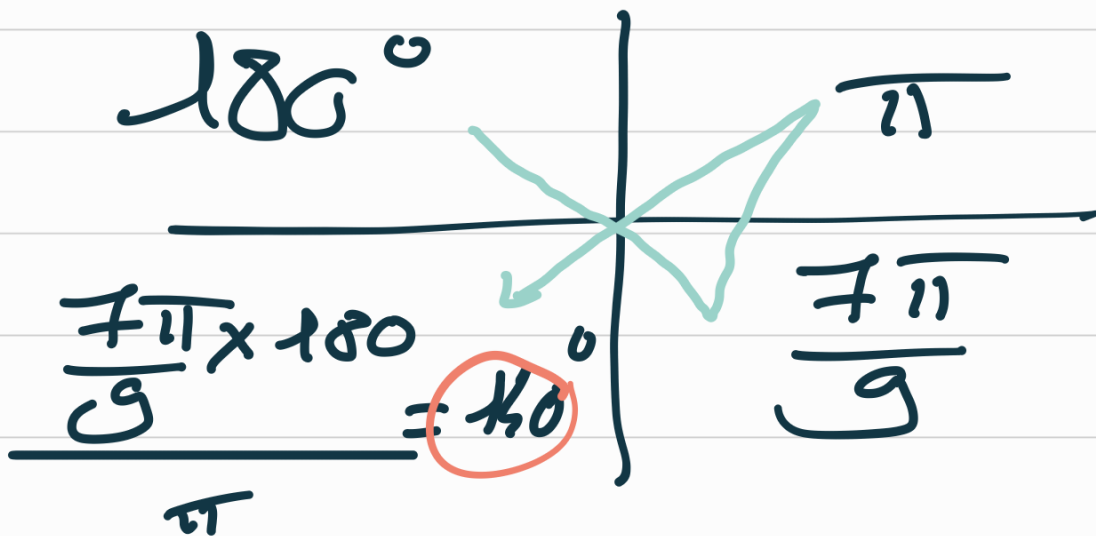
$$L = \frac{r \times \pi \times a}{180}$$

$$40 = \frac{r \times \pi \times 30}{180}$$

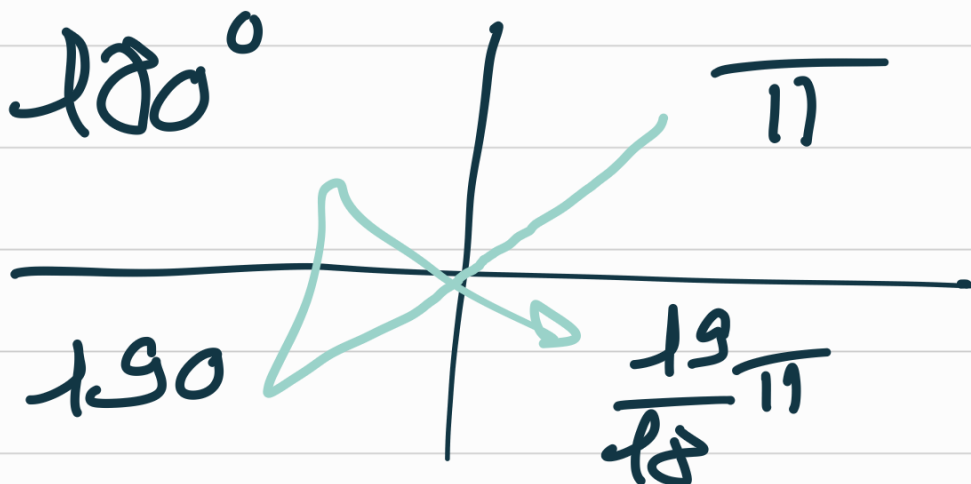
$$\frac{180 \times 40}{\pi \times 30} = r$$

$$r = \frac{240}{\pi} \text{ cm.}$$

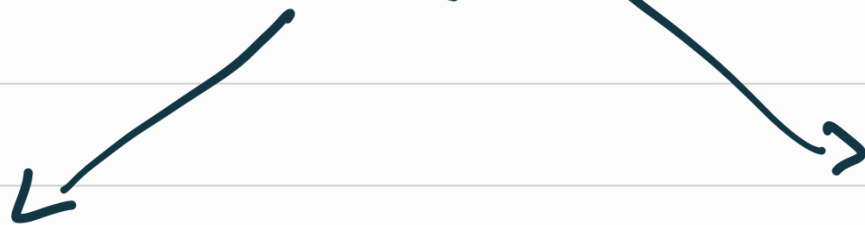
- $\frac{7\pi}{9} \text{ rad} = 140^\circ$



- $190^\circ = \text{rad}$

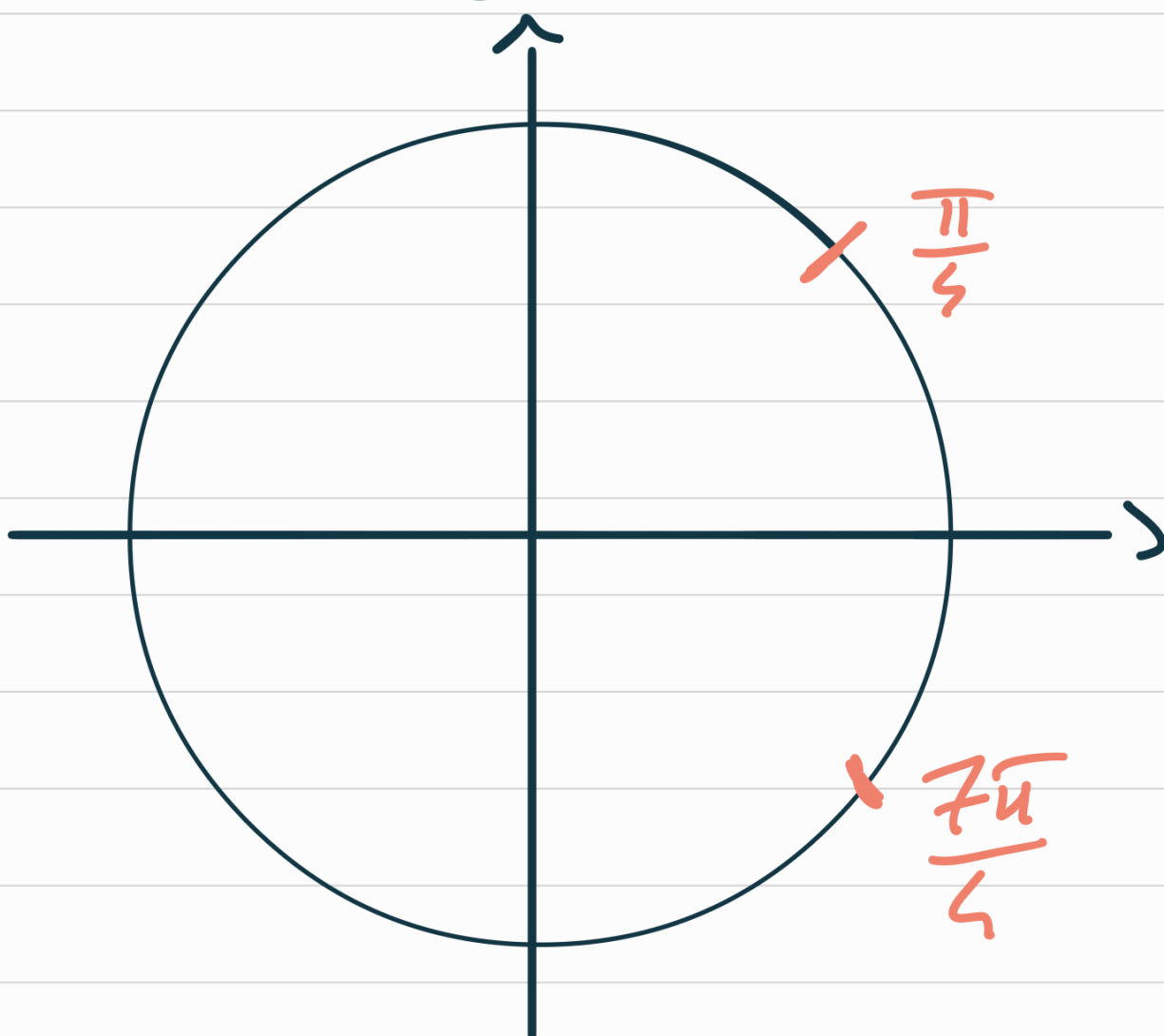


$$\frac{7\pi}{4}$$

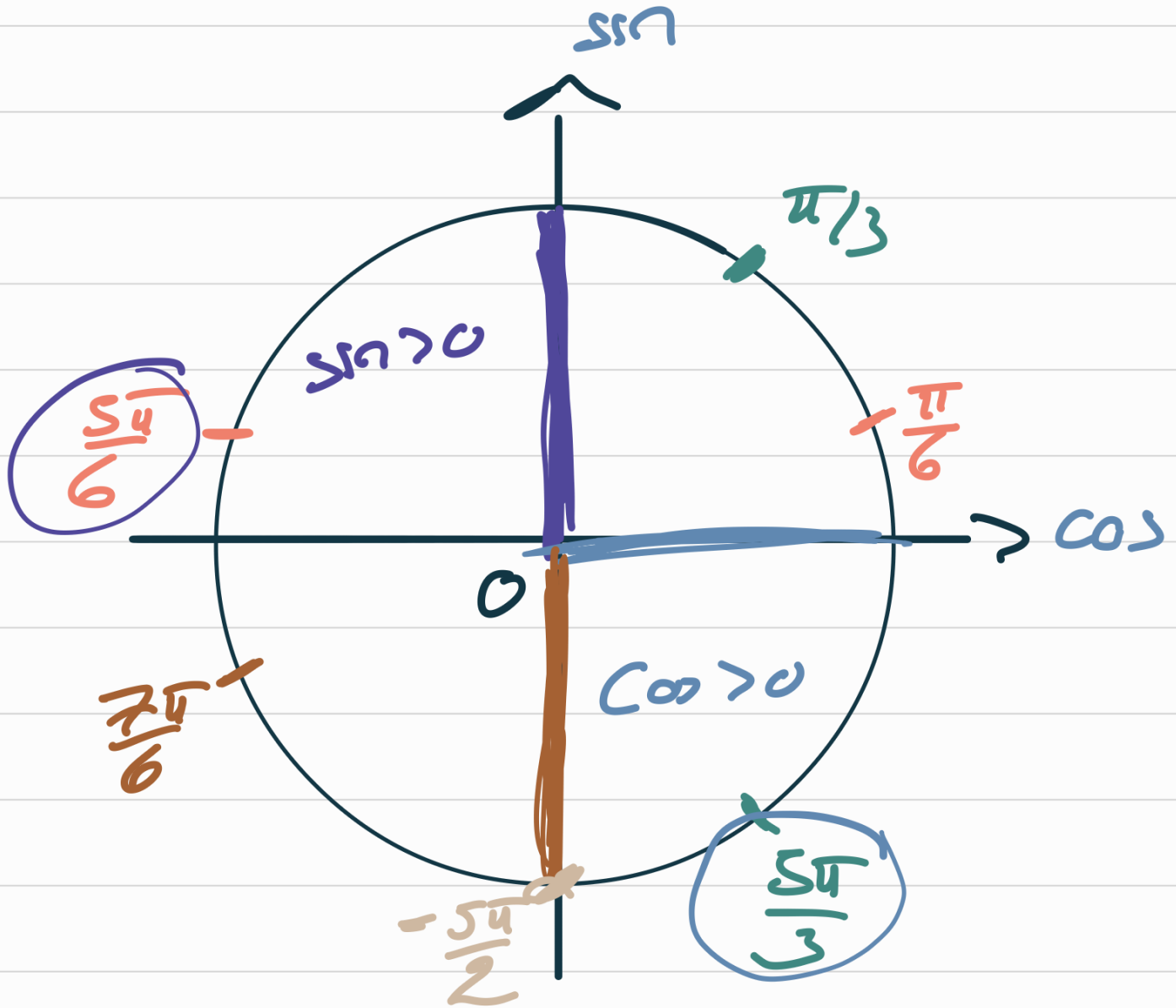


$$\cos\left(\frac{7\pi}{4}\right) = \frac{\sqrt{2}}{2}$$

$$\sin\left(\frac{7\pi}{4}\right) = -\frac{\sqrt{2}}{2}$$



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



- $\cos\left(\frac{5\pi}{3}\right) = \frac{1}{2}$

- $\sin\left(\frac{7\pi}{6}\right) = -\frac{1}{2}$

- $\cos\left(-\frac{5\pi}{2}\right) = 0$

$$\bullet \cos\left(\frac{11\pi}{3}\right) + \sin\left(\frac{11\pi}{6}\right)$$

$$= \frac{1}{2} + \frac{1}{2}$$

$$= 1$$

$$\bullet \sin\left(\frac{5\pi}{6}\right) + \sin\left(\frac{7\pi}{6}\right)$$

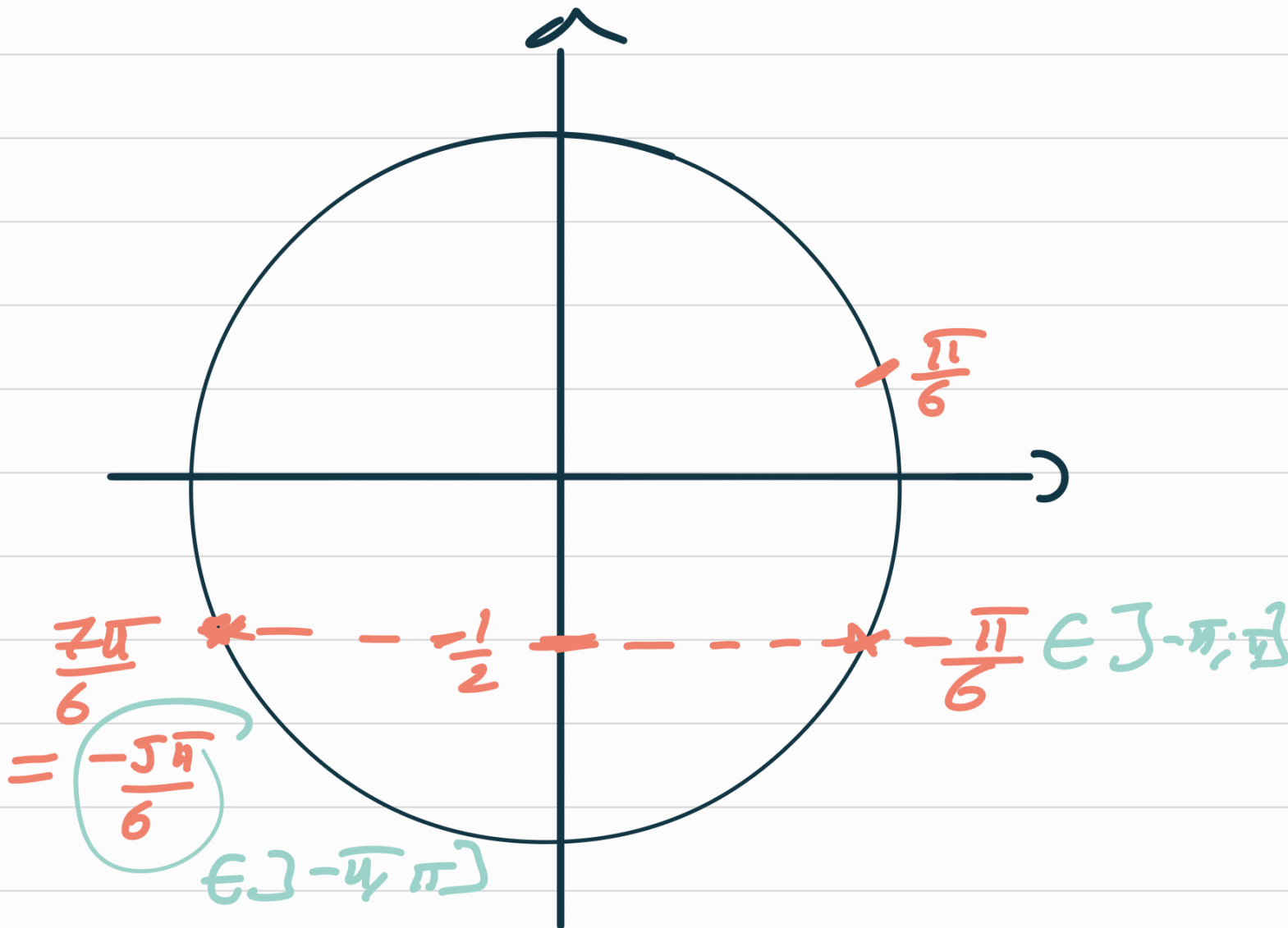
$$= \frac{1}{2} + \left(-\frac{1}{2}\right)$$

$$= 0$$

$$\bullet \quad 2 \sin(x) + 1 = 0$$

$$2 \sin(x) = -1$$

$$\sin(x) = -\frac{1}{2}$$



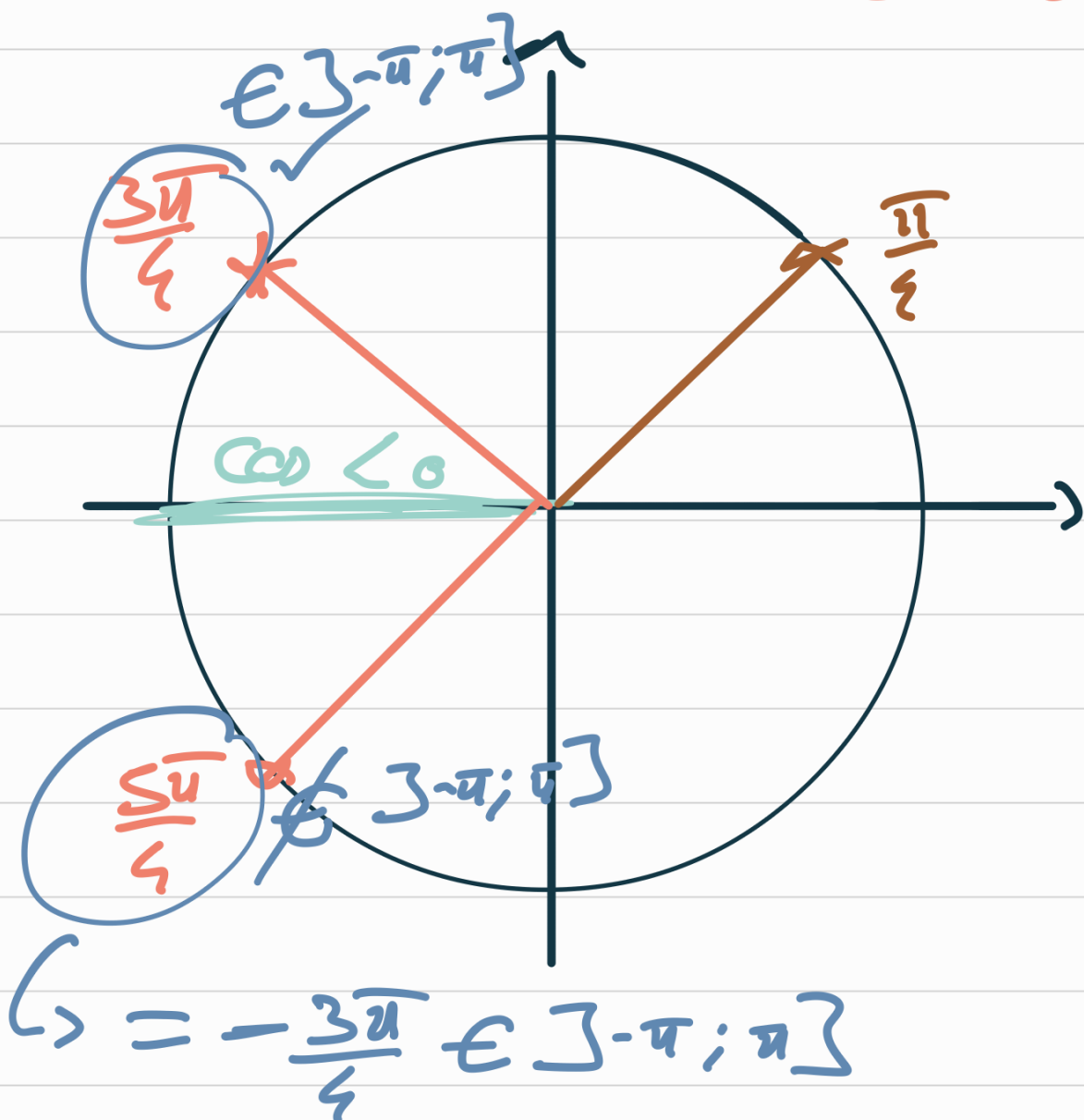
$$\text{donc } \mathcal{S} = \left\{ -\frac{5\pi}{6}; -\frac{\pi}{6} \right\}$$

$$\bullet \sqrt{2} \cos(x) + 1 = 0$$

$$\sqrt{2} \cos(x) = -1$$

$$\cos(x) = -\frac{1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$$

famille
de $\frac{\pi}{4}$



donc $\mathcal{S} = \left\{ \frac{3\pi}{4}; -\frac{3\pi}{4} \right\}$.