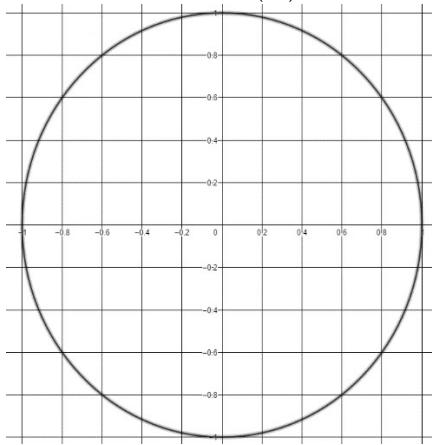


Exercise 1Calc. : X

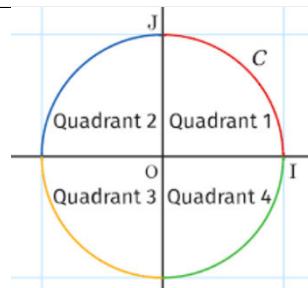
4 marks

Find the value of $\cos\left(\frac{7\pi}{4}\right)$ using the unit circle below.

**Exercise 2**Calc. : X

4 marks

True or false? Justify your answer.
If $\sin(\alpha) > 0$ and α is in Quadrant 2, $\tan(\alpha) > 0$.



Exercise 3Calc. : **X**

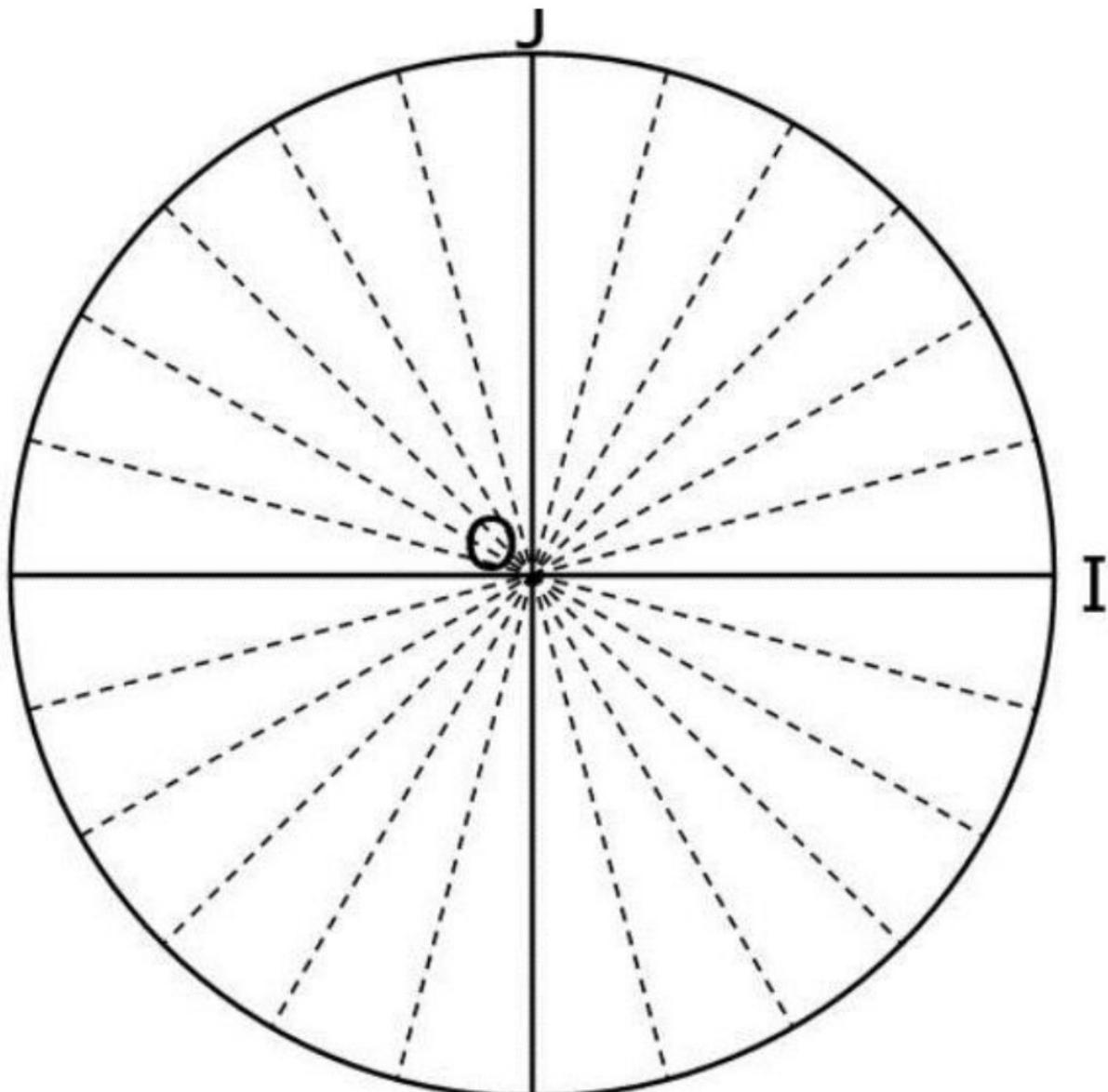
3. Place on the unit circle the following angles and for each one of them give the sin and the cos: (8 points)

a. $\frac{5\pi}{4}$

c. $\frac{\pi}{3}$

b. $\frac{11\pi}{6}$

d. π

**Exercise 4**Calc. : **X**

5 marks	Bestimme den Wert der folgenden Ausdrücke:		
	$A = \sin(135^\circ)$ $B = \sin(-60^\circ)$	$C = \cos(300^\circ)$ $D = \sin(330^\circ)$	$E = \tan(135^\circ)$

Exercise 5Calc. : X

Convert:

- 1 mark 1. $\frac{\pi}{12}$ rad into degrees
- 1 mark 2. 24° into radians

Exercise 6Calc. : ✓

- 8 marks a) Convertir les mesures des trois angles des degrés en radians (donner des valeurs exactes).

$$\alpha = 45^\circ$$

$$\beta = 15^\circ$$

$$\gamma = 275^\circ$$

- b) Convertir les mesures des trois angles des radians en degrés (donner des valeurs exactes, sauf pour l'angle γ que vous arrondirez au centième).

$$\alpha = \frac{2}{3}\pi \text{ rad}$$

$$\beta = \frac{7}{12}\pi \text{ rad}$$

$$\gamma = 3 \text{ rad}$$

Exercise 7Calc. : ✓Drücken Sie die folgenden WinkelmaSSe in **BogenmaSS** aus:

1 mark 1. 90°

1 mark 2. 235°

Drücken Sie die folgenden WinkelmaSSe im **GradmaSS** aus:

1 mark 3. $\frac{\pi}{3}$ rad

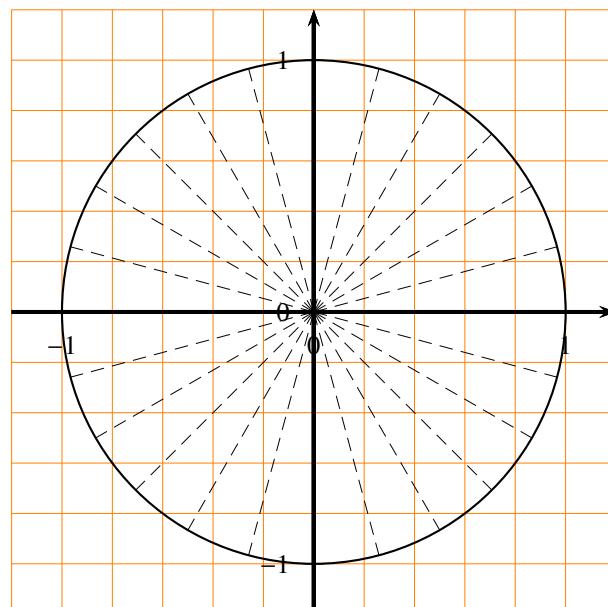
1 mark 4. $\frac{21\pi}{4}$ rad

Exercise 8Calc. : X

- 2 marks 1. Indiquer sur le graphique ci-contre les angles correspondant à:
- | | |
|----------------|-------------------------|
| (a) 30° | (c) $\frac{\pi}{4}$ rad |
| (b) 90° | (d) $\frac{\pi}{3}$ rad |

- 4 marks 2. Remplir le tableau ci-dessous. Expliquez le raisonnement menant aux résultats.

Angle α	30°	$\frac{\pi}{3}$ rad
$\sin \alpha$		
$\cos \alpha$		

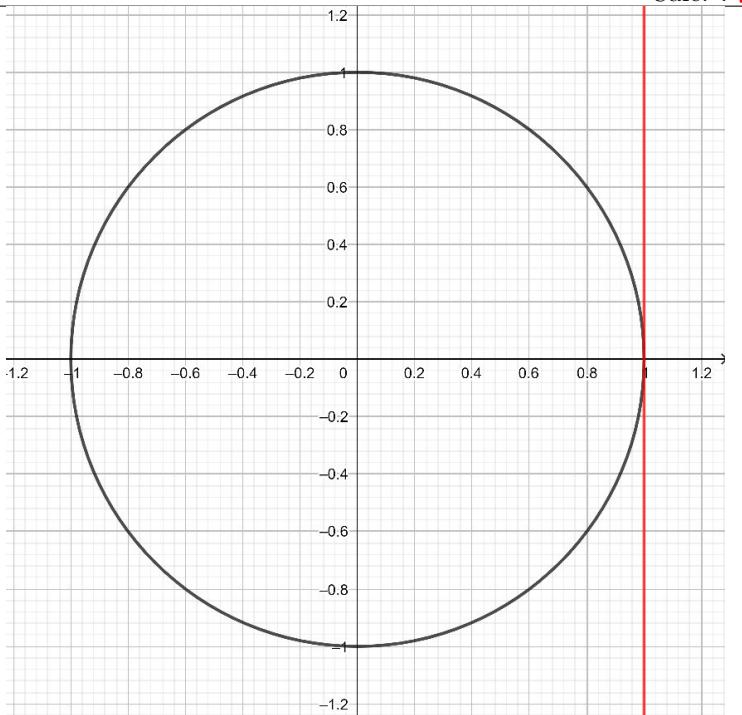


Excercise 9Calc. : X

La figura rappresenta la circonferenza goniometrica.

Sapendo che $\sin(\alpha) = \frac{3}{5}$:

- 2 marks 1. Costruisci gli angoli che soddisfano la condizione data;
- 3 marks 2. Ricava il valore della tangente di tali angoli;
- 4 marks 3. Costruisci graficamente i valori trovati delle tangenti.

**Excercise 10**Calc. : ✓

Un angolo α del primo quadrante è tale che

$$\tan(\alpha) = 3$$

- 2 marks 1. Ricava $\sin(\alpha)$ e $\cos(\alpha)$ approssimando i valori a tre cifre decimali.
- 4 marks 2. Calcola l'angolo α in gradi approssimando a due cifre decimali.