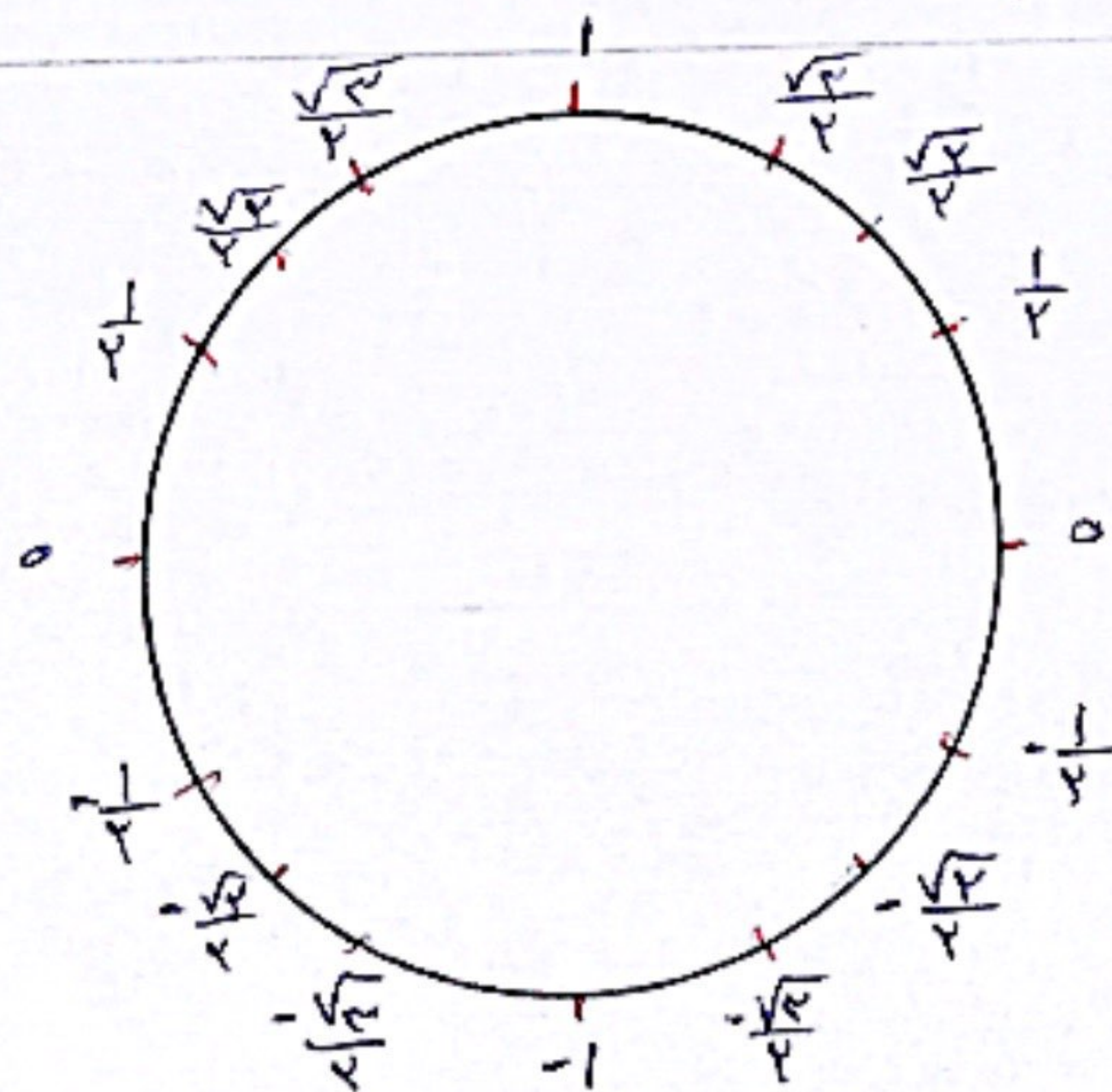
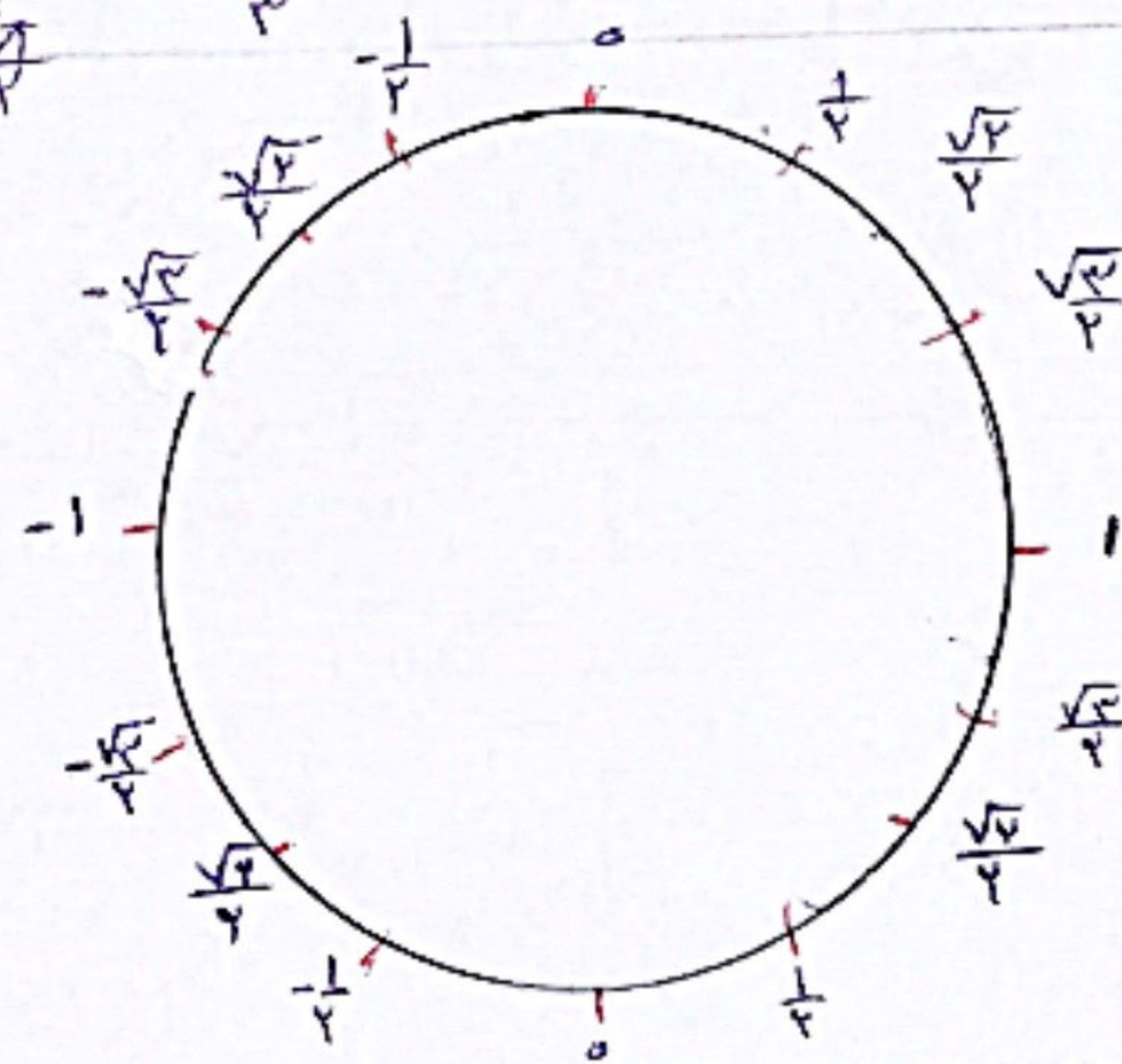
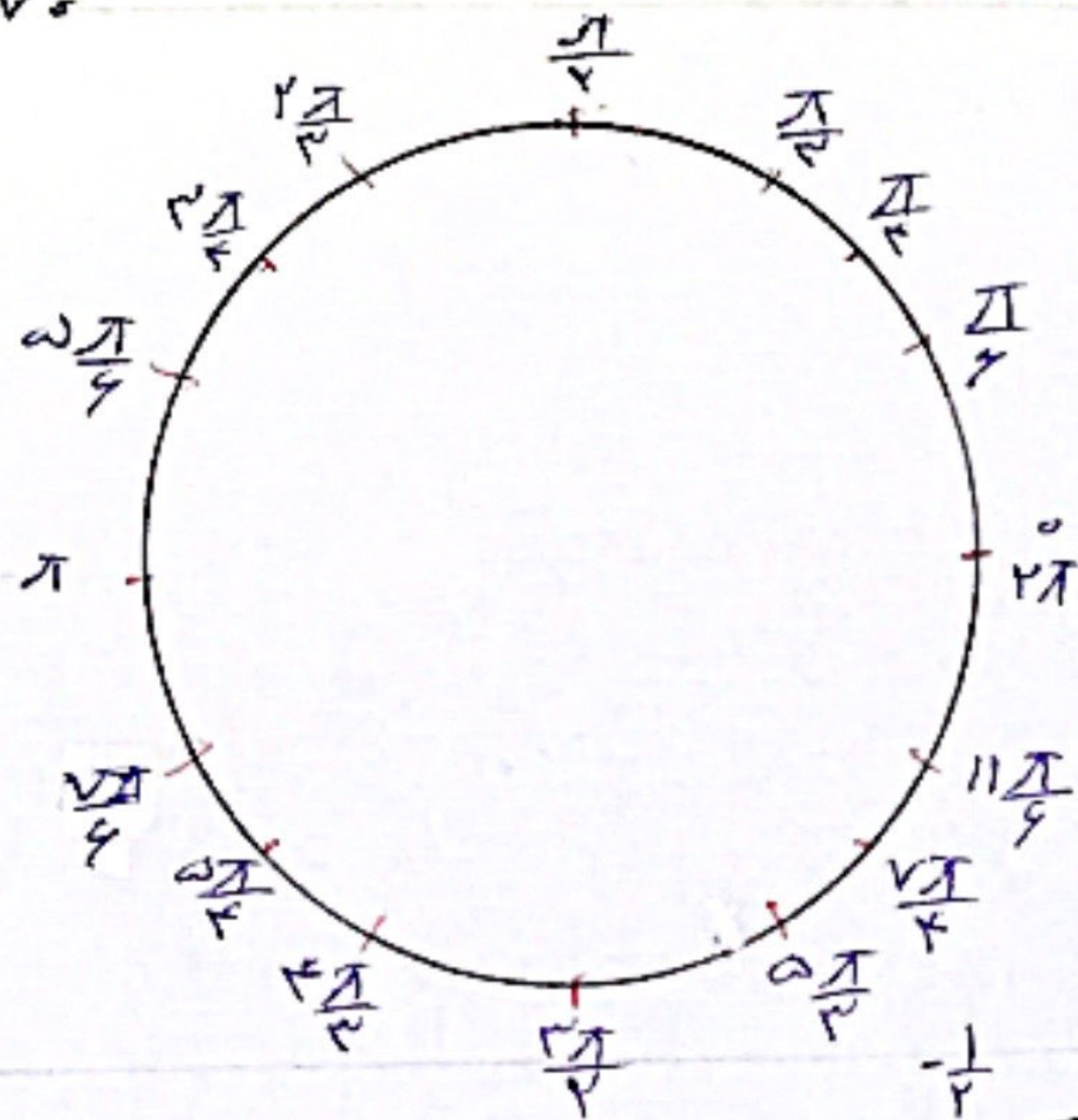
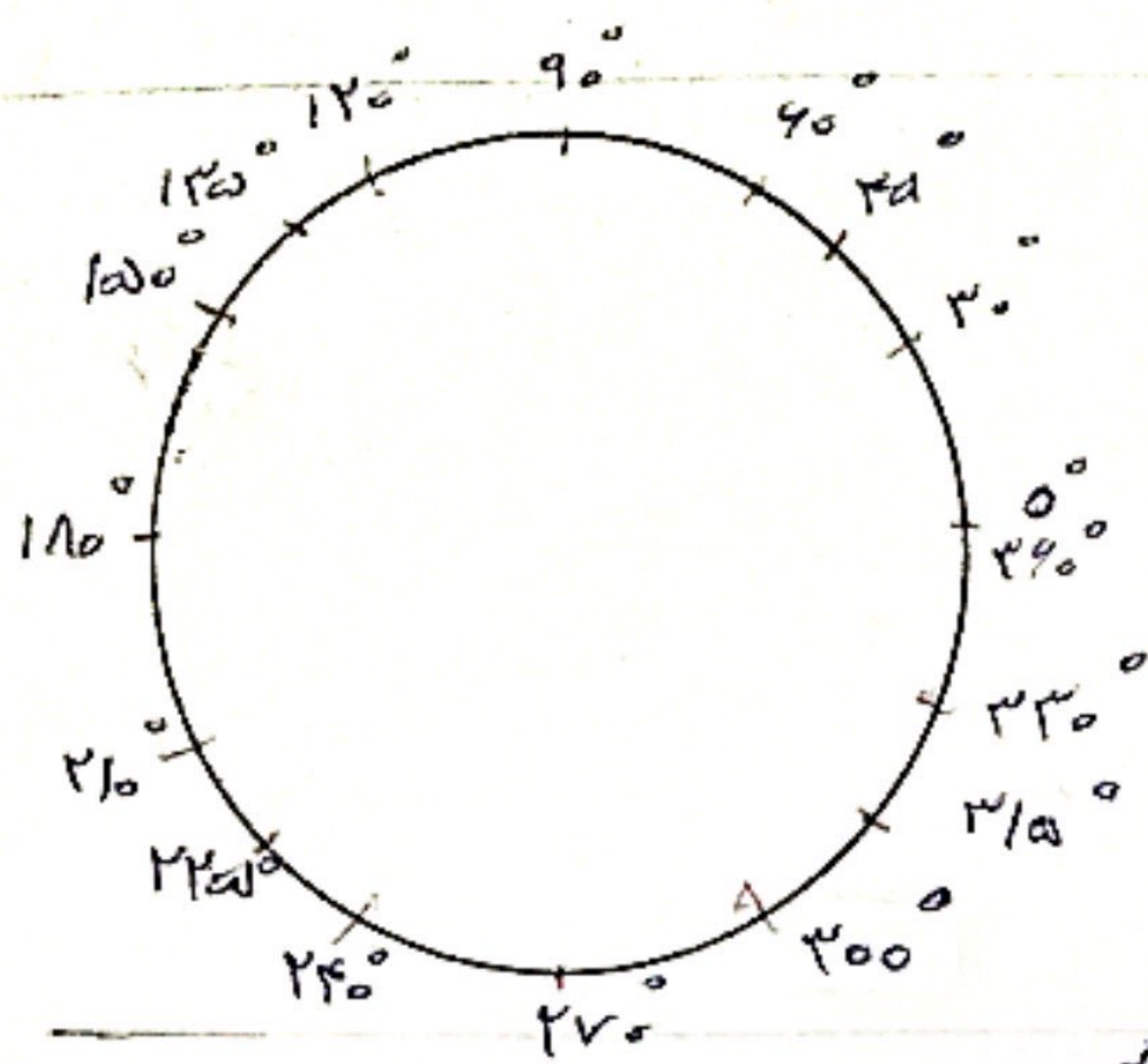
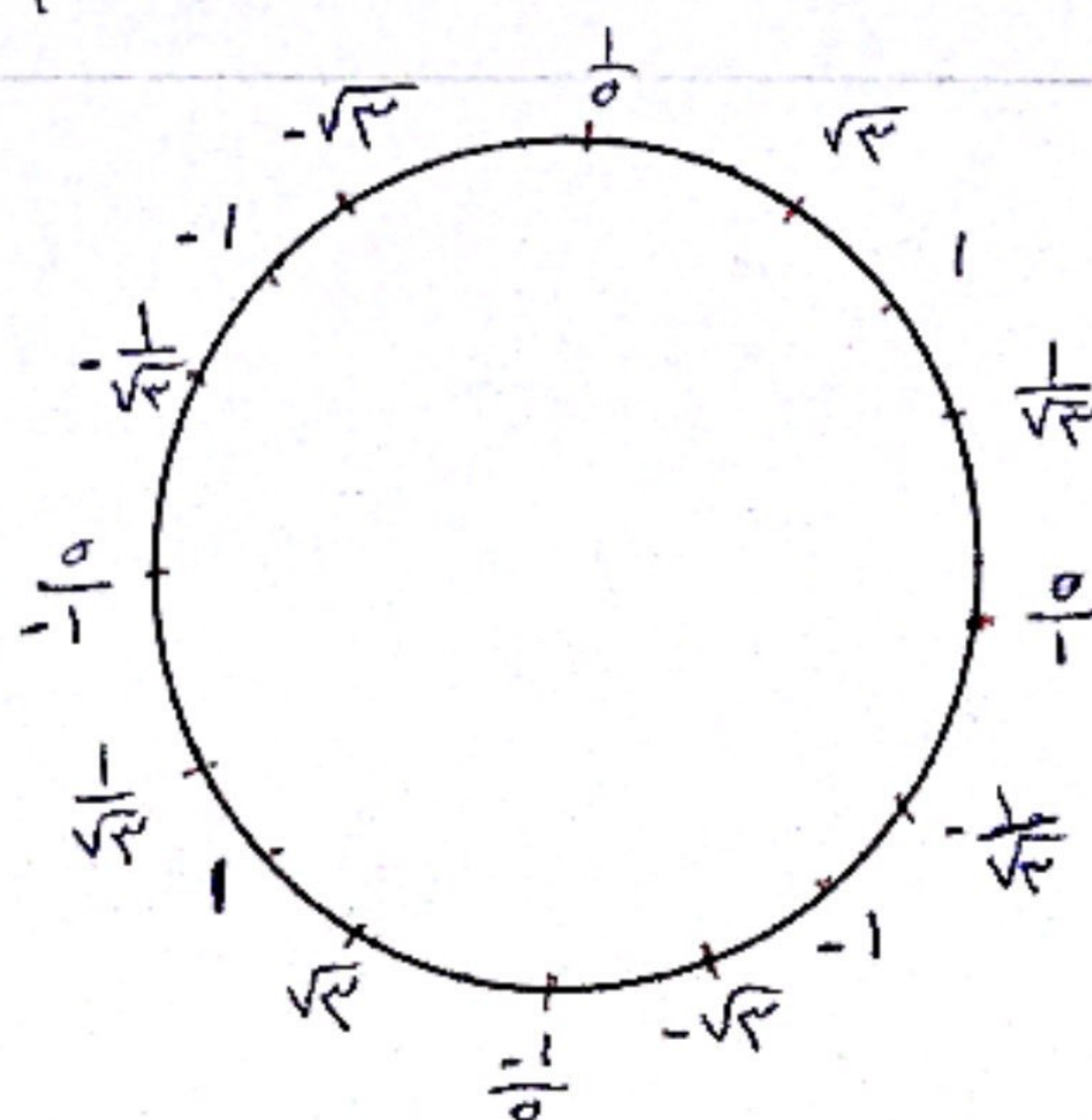
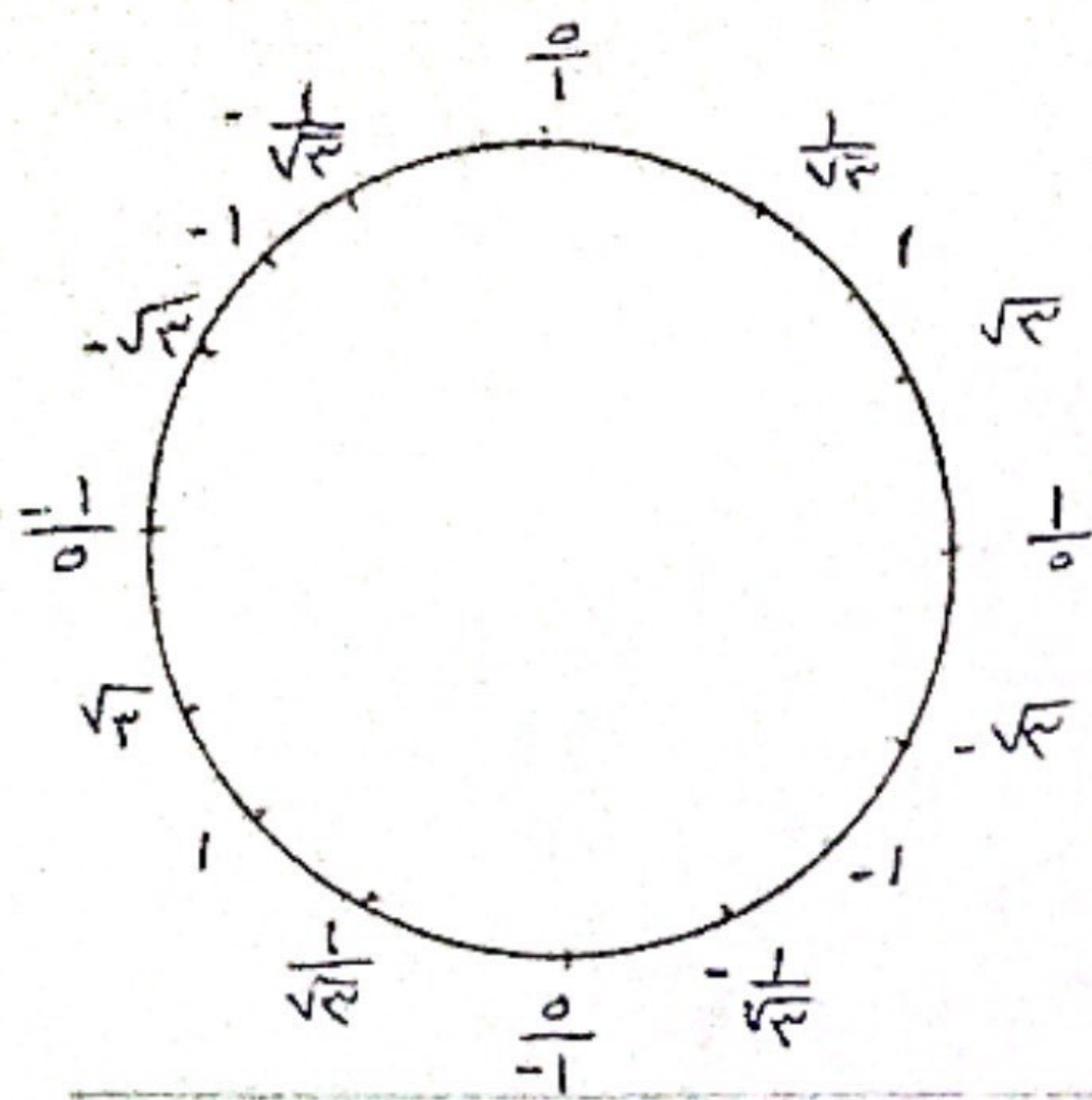


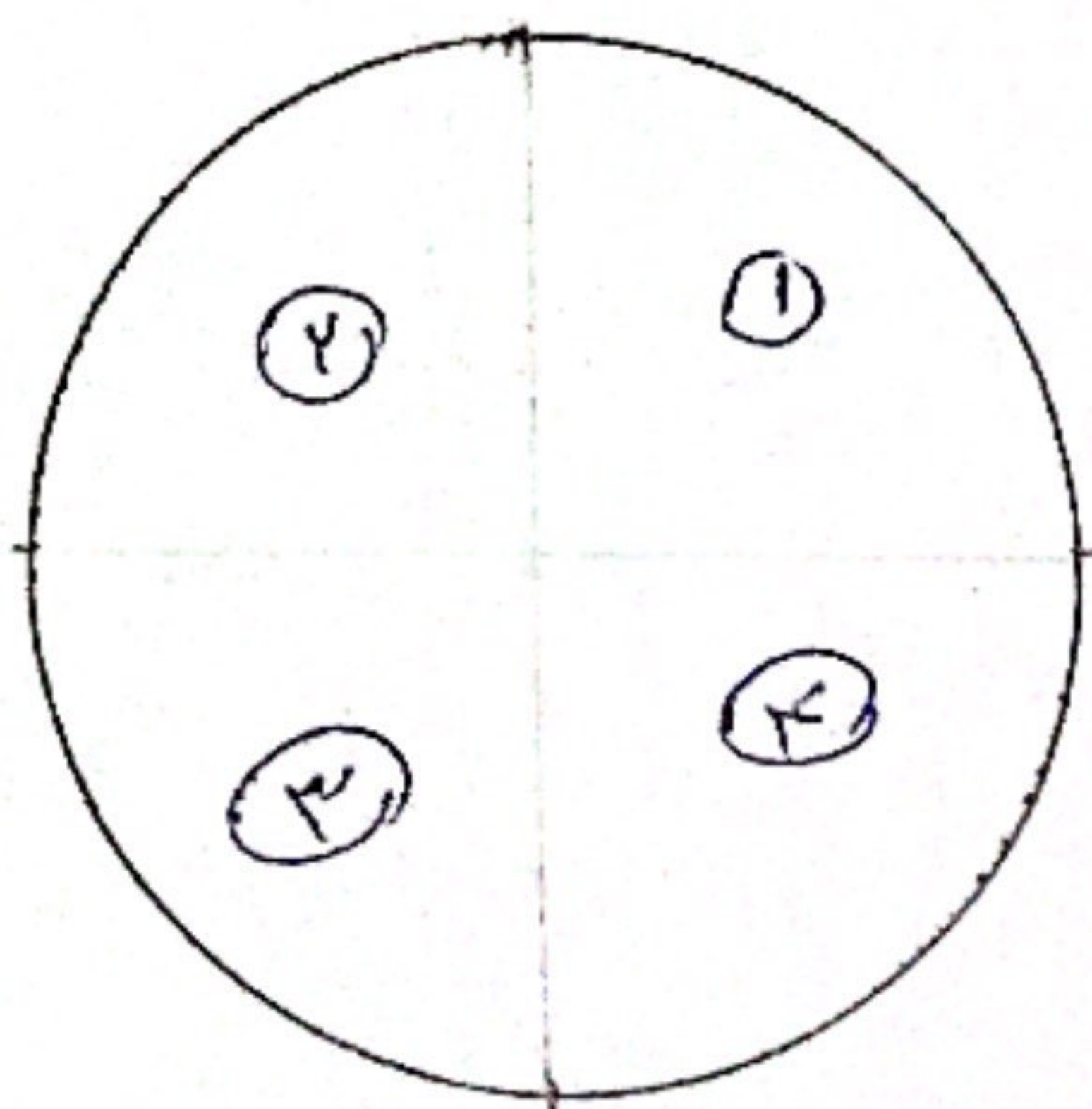


$$\tan = \frac{\sin}{\cos}$$





$$\cot = \frac{\cos}{\sin}$$



(1) : $\cos > 0$	$\sin > 0$	$\tan > 0$	$\cot > 0$
(2) : $\cos < 0$	$\sin > 0$	$\tan < 0$	$\cot < 0$
(3) : $\cos < 0$	$\sin < 0$	$\tan > 0$	$\cot > 0$
(4) : $\cos > 0$	$\sin < 0$	$\tan < 0$	$\cot < 0$

$$\sin 135^\circ = \frac{\sqrt{2}}{2}$$

$$\cos 135^\circ = -\frac{\sqrt{2}}{2}$$

$$\tan 135^\circ = -1$$

$$\cot 135^\circ = -1$$

$$\sin 45^\circ = \frac{\sqrt{2}}{2}$$

$$\cos 45^\circ = \frac{\sqrt{2}}{2}$$

$$\tan 45^\circ = 1$$

$$\cot 45^\circ = 1$$

(الف)

(ب)

(ج)

(د)

$$\cos \frac{5\pi}{4} = -\frac{\sqrt{2}}{2} \rightarrow \frac{\sqrt{2}}{2} \begin{cases} \sin \frac{\pi}{4} = \frac{\sqrt{2}}{2} \\ \sin \frac{3\pi}{4} = \frac{\sqrt{2}}{2} \end{cases}$$

(الف)

$$\cos \frac{11\pi}{4} = \frac{\sqrt{2}}{2} \rightarrow -\frac{\sqrt{2}}{2} \begin{cases} \sin \frac{3\pi}{4} = \frac{\sqrt{2}}{2} \\ \sin \frac{5\pi}{4} = -\frac{\sqrt{2}}{2} \end{cases}$$

(ب)

$$\cot \frac{5\pi}{4} = \frac{\cos \frac{5\pi}{4}}{\sin \frac{5\pi}{4}} = \frac{-\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}} = 1 \rightarrow \cos 135^\circ = \cos \frac{3\pi}{4} = -\frac{\sqrt{2}}{2}$$

(الف)

$$\cos 135^\circ = -\frac{\sqrt{2}}{2} \rightarrow \frac{\sqrt{2}}{2} \begin{cases} \sin 45^\circ = \frac{\sqrt{2}}{2} \\ \sin 135^\circ = \frac{\sqrt{2}}{2} \end{cases}$$

(ب)