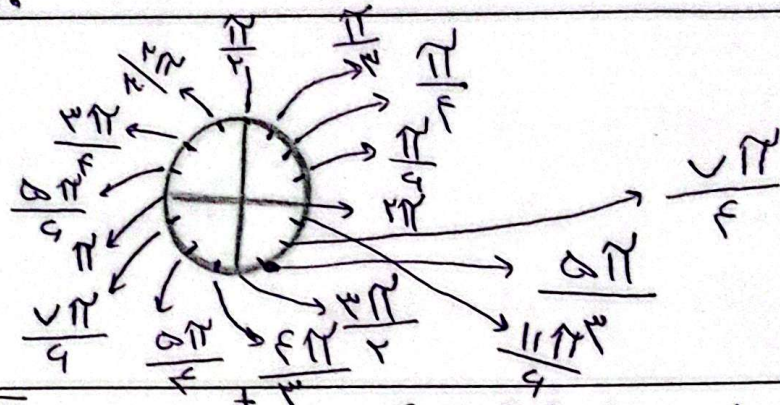
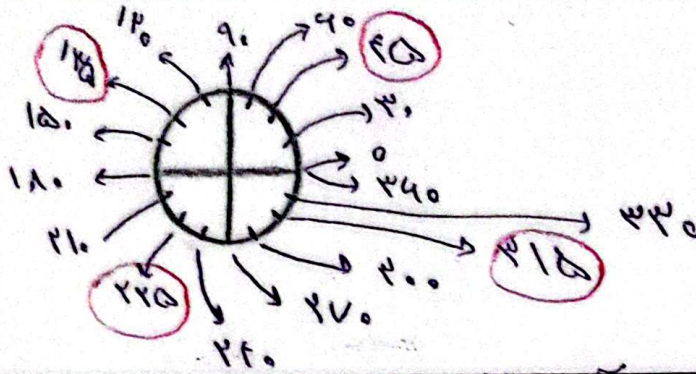


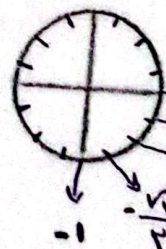


$\cos$
 $\left\{ \begin{array}{l} 135^\circ = -\frac{\sqrt{2}}{2} \\ 150^\circ = -\frac{\sqrt{3}}{2} \\ 180^\circ = -1 \\ 210^\circ = -\frac{\sqrt{3}}{2} \\ 225^\circ = -\frac{\sqrt{2}}{2} \\ 240^\circ = -\frac{1}{2} \end{array} \right.$

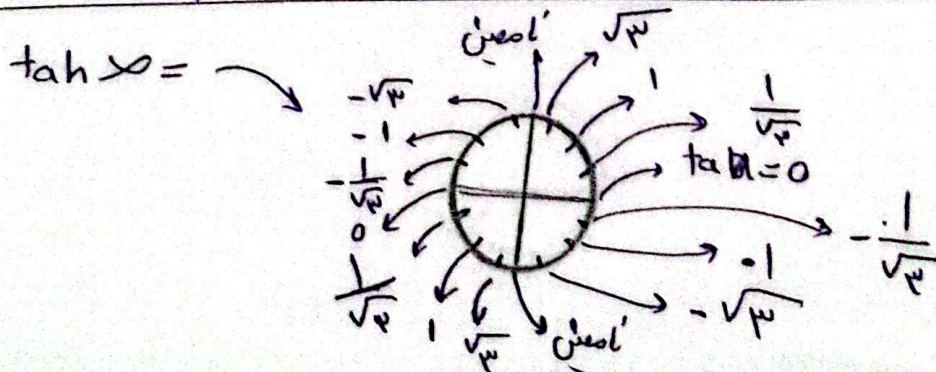


$\cos$
 $\left\{ \begin{array}{l} 0, 360^\circ = 1 \\ 30^\circ = \frac{\sqrt{3}}{2} \\ 45^\circ = \frac{\sqrt{2}}{2} \\ 60^\circ = \frac{1}{2} \\ 90^\circ = 0 \\ 270, 90^\circ = 0 \\ 120^\circ = -\frac{1}{2} \end{array} \right.$

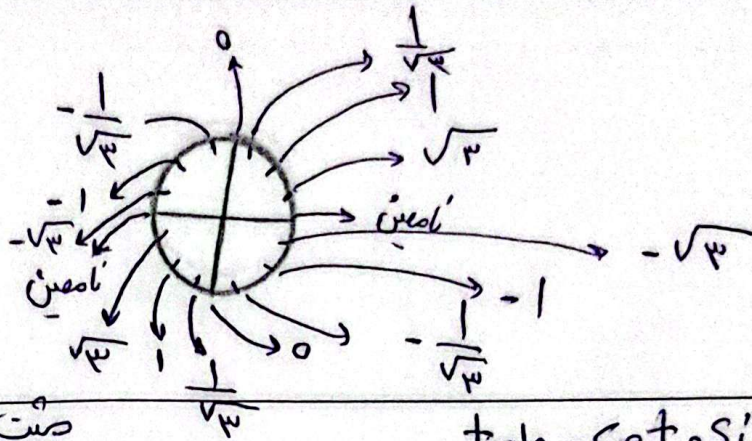
$\sin$
 $\left\{ \begin{array}{l} 135^\circ = \frac{\sqrt{2}}{2} \\ 150^\circ = \frac{1}{2} \\ 180^\circ = 0 \\ 210^\circ = -\frac{1}{2} \\ 225^\circ = -\frac{\sqrt{2}}{2} \\ 240^\circ = -\frac{\sqrt{3}}{2} \end{array} \right.$



$\sin$
 $\left\{ \begin{array}{l} 0, 360^\circ = 0 \\ 30^\circ = \frac{1}{2} \\ 45^\circ = \frac{\sqrt{2}}{2} \\ 60^\circ = \frac{\sqrt{3}}{2} \\ 90^\circ = 1 \\ 270, 90^\circ = 1 \\ 120^\circ = \frac{\sqrt{3}}{2} \end{array} \right.$



$$\cot \varphi =$$



$\sin \Rightarrow +$ مثبت
 $\cos, \tan, \cot = -$ منفي
 $\sin, \cos =$ منفي
 $\tan, \cot = +$ مثبت
 $\sin, \cos, \tan, \cot = +$ مثبت
 $\sin, \cos, \tan, \cot = -$ منفي
 $\cos = +$ مثبت

$\sin \Rightarrow 120 = -\frac{1}{2} \rightarrow 240 = -\frac{1}{2}$ (الف)
 $\cos \Rightarrow 150 = -\frac{\sqrt{3}}{2} \rightarrow 210 = -\frac{\sqrt{3}}{2}$ (ب)
 $\tan \Rightarrow 225 = -1 \rightarrow 135 = -1$ (ج)
 $\cot \Rightarrow 135 = -1 \rightarrow 225 = -1$ (د)

$\frac{2\pi}{3} = \cos \Rightarrow -\frac{1}{2} \text{ مرتبه } = \frac{1}{2} = 30 = \frac{\pi}{6}$ (الف)

$\frac{11\pi}{4} = \cos \Rightarrow \frac{\sqrt{3}}{2} = -\frac{\sqrt{3}}{2} = 240 = \frac{4\pi}{3}$ (ب)

$\cot \varphi = \frac{\sqrt{3}}{4} = \cos$ (الف)
 $\rightarrow 1 = 0, 360$

$\cos \varphi = 150 \Rightarrow -\frac{\sqrt{3}}{2} \neq \frac{\sqrt{3}}{2} = 90$ (ب)