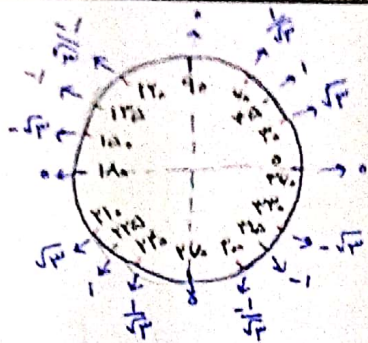




$$\frac{\sin}{\cos} = \tan$$

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

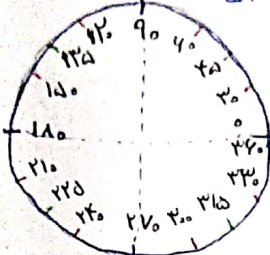
۶

ربع دوم

cos = منفی
sin = مثبت
tan = منفی
cot = منفی

ربع اول

cos = مثبت
sin = مثبت
tan = مثبت
cot = مثبت



ربع سوم

cos = منفی
sin = منفی
tan = مثبت
cot = مثبت

ربع چهارم

cos = مثبت
sin = منفی
tan = منفی
cot = منفی

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$$150^\circ \left| \begin{array}{l} -\frac{\sqrt{3}}{2} \\ \frac{1}{2} \end{array} \right. \Rightarrow \cos = \left(\frac{1}{2} \right)$$

$$120^\circ \left| \begin{array}{l} -\frac{\sqrt{3}}{2} \\ -\frac{1}{2} \end{array} \right. \Rightarrow \cos = \left(-\frac{1}{2} \right)$$

$$120^\circ \left| \begin{array}{l} -\frac{1}{2} \\ \frac{\sqrt{3}}{2} \end{array} \right. \Rightarrow \sin = \left(\frac{\sqrt{3}}{2} \right)$$

$$\left(\frac{\sqrt{3}}{2} \right) \Rightarrow \sin$$

$$\cot(120^\circ) = \frac{\cos}{\sin} = -1$$

$$\cot(150^\circ) = \frac{\cos}{\sin} = -1$$

$$\tan(120^\circ) = \frac{\sin}{\cos} = -\frac{1}{\sqrt{3}}$$

$$\tan(150^\circ) = \frac{\sin}{\cos} = -\frac{1}{\sqrt{3}}$$

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(ج)

$$\frac{\sqrt{3}}{2} = 120^\circ \Rightarrow \cos = -\frac{1}{2} \xrightarrow{\sin = \frac{1}{2}} \frac{1}{2} \xrightarrow{\sin = \frac{1}{2}} 150^\circ = \frac{5\pi}{6}, 30^\circ = \frac{\pi}{6}$$

$$\frac{11\pi}{6} = 330^\circ \Rightarrow \cos = \frac{\sqrt{3}}{2} \xrightarrow{\sin = -\frac{1}{2}} -\frac{1}{2} \xrightarrow{\sin = -\frac{1}{2}} 150^\circ = \frac{5\pi}{6}, 210^\circ = \frac{7\pi}{6}$$

۹

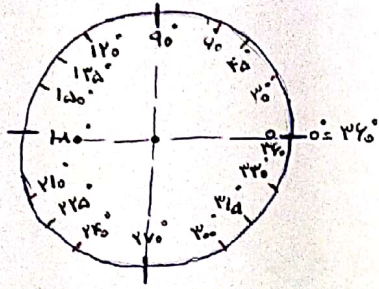
$$\cot \frac{\sqrt{3}\pi}{4} = -1 \xrightarrow{\cos = -1} 180^\circ = \pi$$

$$\cos 150^\circ = -\frac{\sqrt{3}}{2} \xrightarrow{\sin = \frac{1}{2}} \frac{1}{2} \xrightarrow{\sin = \frac{1}{2}} 150^\circ = \frac{5\pi}{6}$$

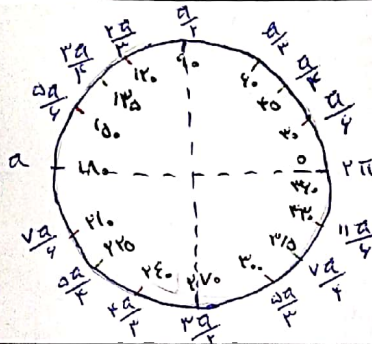
$$120^\circ = \left(\frac{2\pi}{3} \right) \downarrow \frac{2\pi}{3}$$

$$30^\circ = \left(\frac{\pi}{6} \right) \downarrow \frac{\pi}{6}$$

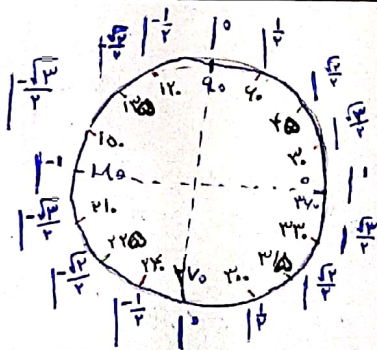
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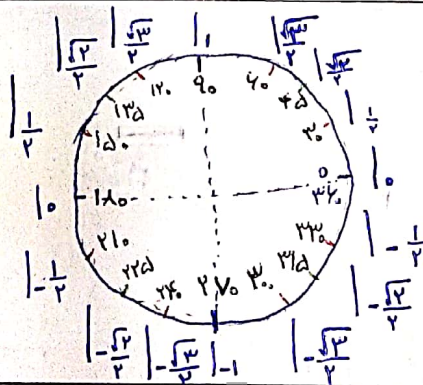


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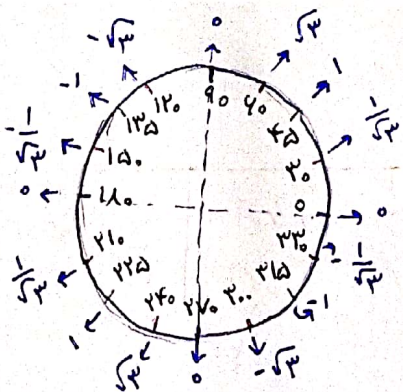
$\cos = x$
 $\sin = y$ → این زرد مشخص می‌کنم

۳



$\cos = x$
 $\sin = y$ → این زرد مشخص می‌کنم

۴



$\frac{\sin}{\cos} = \tan$
 $\frac{\cos}{\sin} = \cot$ → این زرد مشخص می‌کنم

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