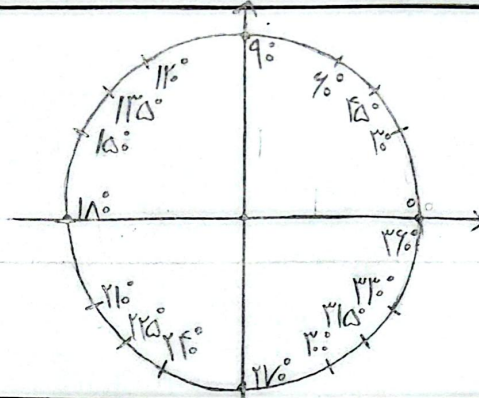
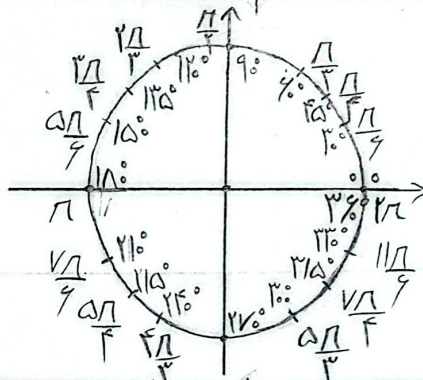


نام و نام خانوادگی ... نگار فیتی ...
 و انتخاب سیمی تلفی شماره ۲۰۰ ... کلاس یجم دبیری ...

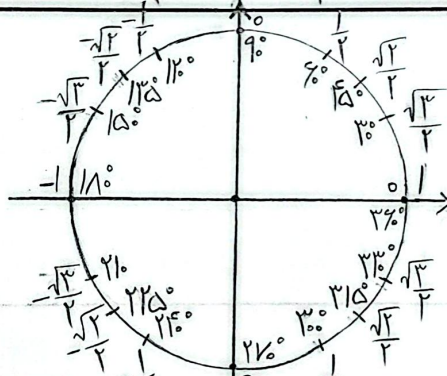
(درجه)



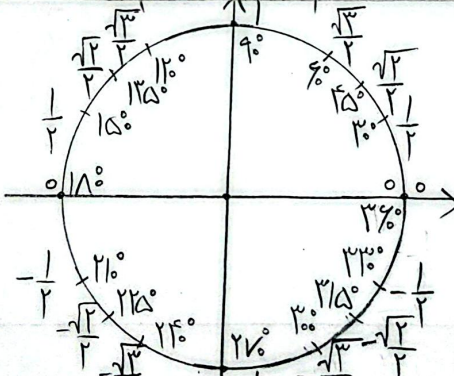
(رادیان)



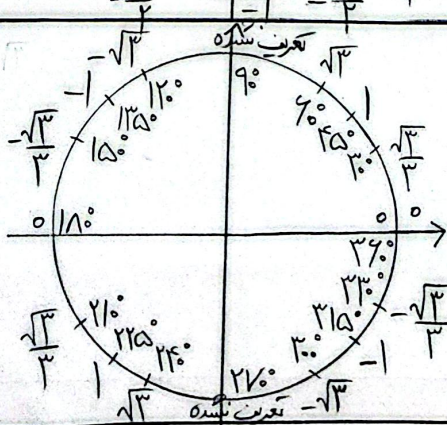
(کسینوس)



(سینوس)



(تانژانت)

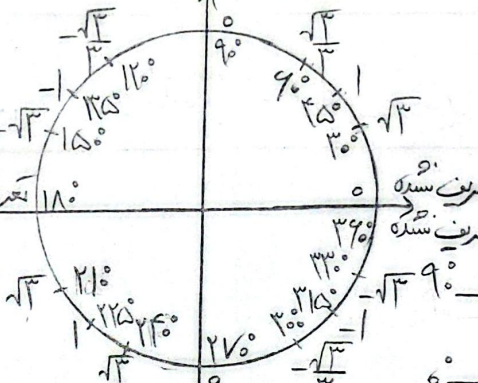
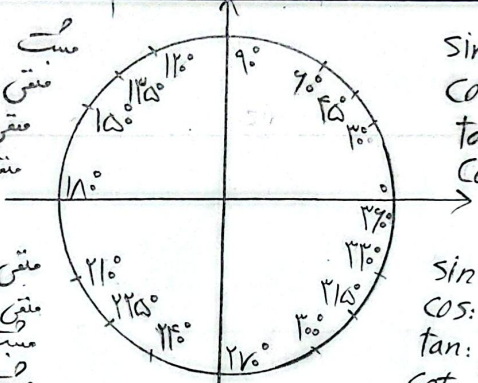


$$\tan = \frac{\sin}{\cos}$$

تعریف شده
 $90^\circ \rightarrow \frac{1}{0} \rightarrow \infty$
 $0^\circ \rightarrow \frac{0}{1} = 0$

۳۰° → $\frac{1}{\sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
 ۴۵° → $\frac{\sqrt{2}}{\sqrt{2}} = 1$
 ۶۰° → $\frac{\sqrt{3}}{1} = \sqrt{3}$

۵

$30^\circ \rightarrow \frac{\sqrt{3}}{2} = \frac{\sqrt{3}}{2}$ $45^\circ \rightarrow \frac{\sqrt{2}}{2} = 1$ $60^\circ \rightarrow \frac{1}{2} = \frac{1}{2} = \frac{\sqrt{3}}{3}$	$\cot = \frac{\cos}{\sin}$ $90^\circ \rightarrow \frac{0}{1} = 0$ $0^\circ \rightarrow \frac{1}{0} = \infty$ تعريف سده 	6
$\sin$: مثبت $\cos$: متني $\tan$: متني $\cot$: متني	$\sin$: مثبت $\cos$: مثبت $\tan$: مثبت $\cot$: مثبت  $\sin$: متني $\cos$: متني $\tan$: مثبت $\cot$: متني	7
$\sin 11^\circ: \frac{\sqrt{3}}{2} \rightarrow \sin 2^\circ: \frac{\sqrt{3}}{2}$ $\cos 15^\circ: -\frac{\sqrt{3}}{2} \rightarrow \cos 11^\circ: -\frac{\sqrt{3}}{2}$ $\tan 23^\circ: \frac{\sin}{\cos} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}} \rightarrow \tan 15^\circ: \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$ $\cot 11^\circ: \frac{\cos}{\sin} = \frac{-\frac{\sqrt{3}}{2}}{\frac{1}{2}} = -\sqrt{3} \rightarrow \cot 23^\circ: \frac{-\sqrt{3}}{\frac{1}{2}} = -2\sqrt{3}$	الف) 6° درجه ب) 11° درجه ج) 15° درجه د) 23° درجه	8
$-\cos 21^\circ: -\cos 11^\circ \rightarrow \frac{1}{2} \rightarrow \sin ? \rightarrow \sin 21^\circ: \frac{1}{2} \rightarrow \frac{5\pi}{6}, \frac{\pi}{6}$ $-\cos 117^\circ: -\cos 33^\circ \rightarrow -\frac{\sqrt{3}}{2} \rightarrow \sin ? \rightarrow \sin 24^\circ: -\frac{\sqrt{3}}{2} \rightarrow \frac{4\pi}{3}, \frac{5\pi}{3}$	الف) $\frac{5\pi}{6}, \frac{\pi}{6}$ ب) $\frac{5\pi}{3}, \frac{4\pi}{3}$	9
$\cot 11^\circ: \cot 23^\circ \rightarrow \frac{\frac{1}{2}}{-\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}} \rightarrow \cos ? \rightarrow \cos 18^\circ: -1$ $-\cos 15^\circ: \frac{\sqrt{3}}{2} \rightarrow \sin ? \rightarrow \sin 6^\circ, 11^\circ$	الف) 18° (ب) ب) $6^\circ, 11^\circ$	10