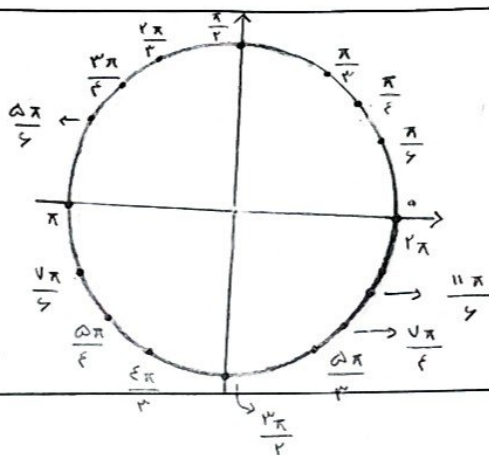
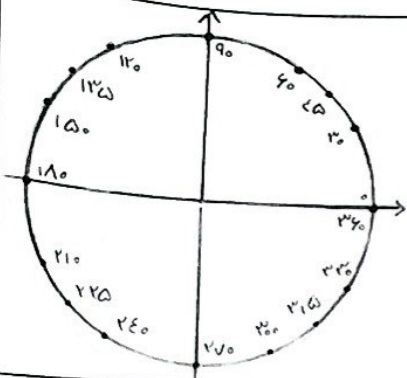
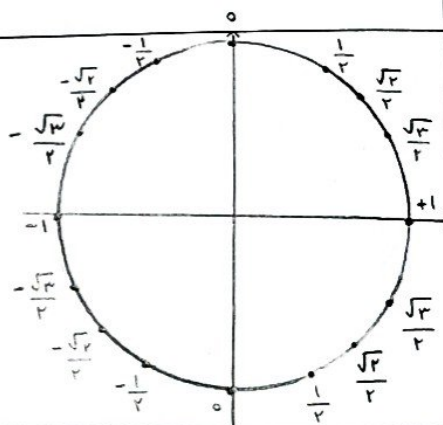
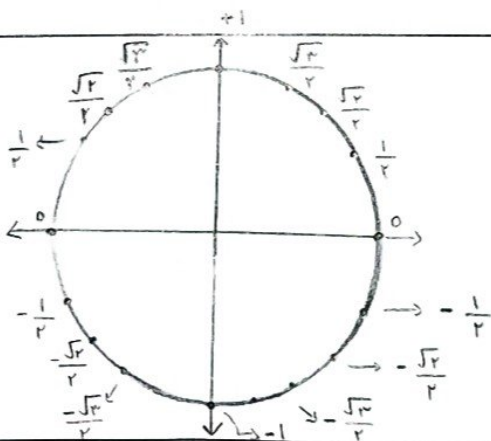




$y = \cos x$



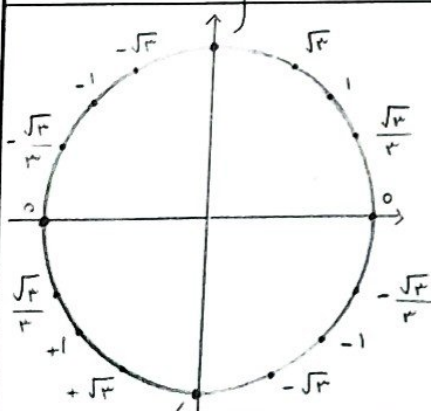
$y = \sin x$



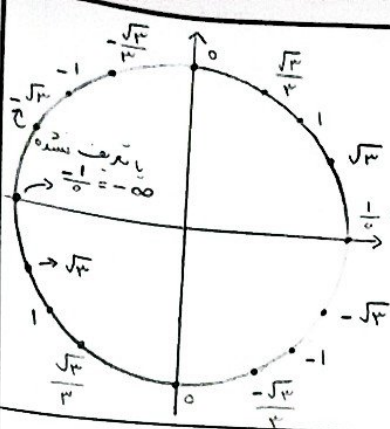
یا تعریف نشده
 $\frac{1}{0} = +\infty$

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

$y = \tan x$

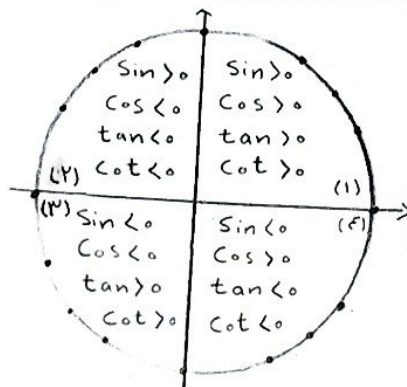


یا تعریف نشده
 $\frac{-1}{0} = -\infty$



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

$$y = \cot x$$



$$\sin 120^\circ = \frac{\sqrt{3}}{2}, \sin 60^\circ = \frac{\sqrt{3}}{2}$$

مقادیر برابر

$$\frac{\pi}{3} \text{ یا } 60^\circ \text{ (الف)}$$

$$\cos 150^\circ = -\frac{\sqrt{3}}{2}, \cos 30^\circ = \frac{\sqrt{3}}{2}$$

مقادیر برابر

$$\frac{\sqrt{3}}{2} \text{ یا } 30^\circ \text{ (ب)}$$

$$\cot 135^\circ = \frac{\cos 135^\circ}{\sin 135^\circ} = -1$$

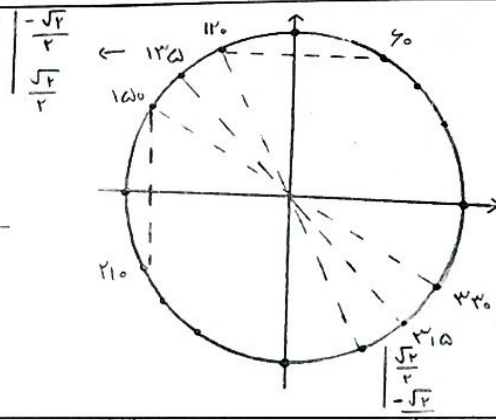
$$\cot 225^\circ = -1$$

جواب: $\frac{\sqrt{2}}{2} \text{ یا } 135^\circ$

$$\tan 225^\circ = \frac{\sin 225^\circ}{\cos 225^\circ} = -\frac{\sqrt{2}}{2}$$

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

جواب: $\frac{\sqrt{2}}{2} \text{ یا } 135^\circ$



$$\frac{r}{r} = \frac{x}{180} \rightarrow x = \frac{180 \times r}{r} = 180^\circ$$

$$\cos 120^\circ = -\frac{1}{2} \rightarrow \frac{1}{2} \rightarrow \sin \alpha = \frac{1}{2} \rightarrow \alpha = 30^\circ, 150^\circ \text{ (الف)}$$

$\downarrow$ $\downarrow$
 $\frac{\pi}{6}$ $\frac{5\pi}{6}$

$$\frac{11}{5} = \frac{x}{180} \rightarrow x = \frac{180 \times 11}{5} = 396^\circ$$

$$\cos 240^\circ = \frac{\sqrt{3}}{2} \rightarrow -\frac{\sqrt{3}}{2} \rightarrow \sin \alpha = -\frac{\sqrt{3}}{2}$$

$$\alpha = 240^\circ, 300^\circ$$

$\downarrow$ $\downarrow$
 $\frac{4\pi}{3}$ $\frac{5\pi}{3}$

$$\frac{v}{e} = \frac{x}{180} \rightarrow x = \frac{180 \times v}{e} = 360^\circ$$

$$\cos \alpha = -1 \rightarrow \alpha = 180^\circ$$

$$\cot 135^\circ = \frac{\cos 135^\circ}{\sin 135^\circ} = \frac{\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}} = -1$$

(الف)

$$\cos 150^\circ = -\frac{\sqrt{3}}{2} \rightarrow \frac{\sqrt{3}}{2} \rightarrow \sin \alpha = \frac{\sqrt{3}}{2} \rightarrow \alpha = 60^\circ, 120^\circ$$

(ب)