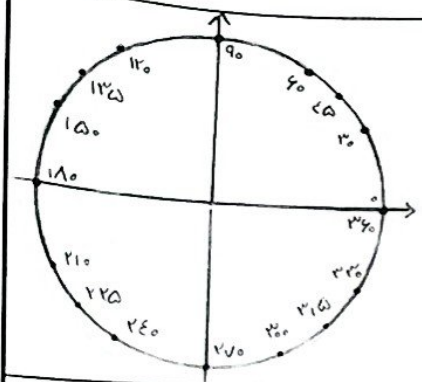
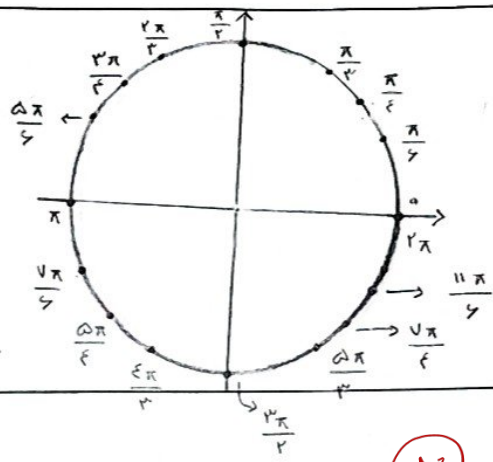




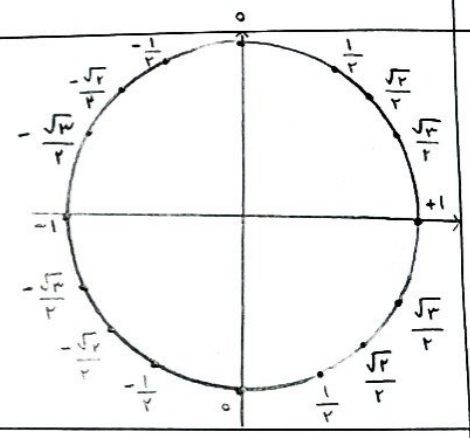
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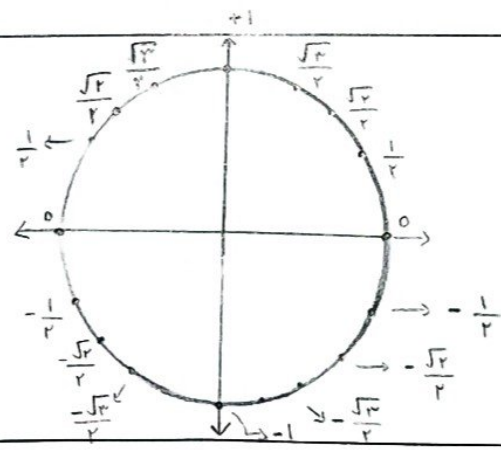
$y = \cos x$

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$y = \sin x$



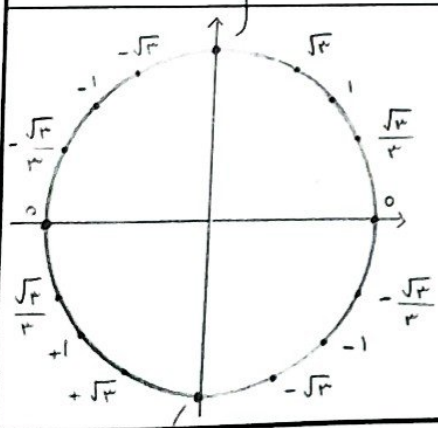
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یافتن نشانه
 $\frac{1}{0} = +\infty$

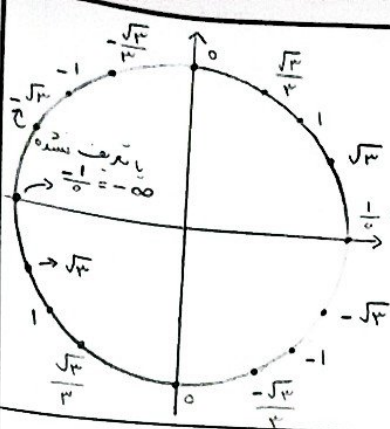
$\tan = \frac{\sin}{\cos}$
 $y = \tan x$

۳



یافتن نشانه
 $\frac{-1}{0} = -\infty$

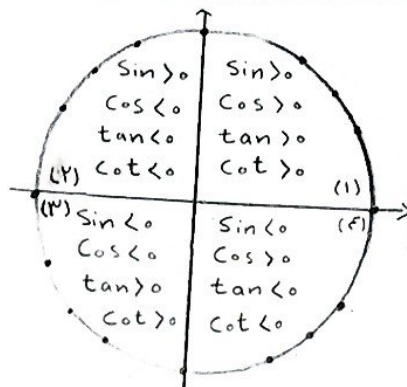
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$$\cot = \frac{\cos}{\sin}$$

$$y = \cot x$$

6



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

مقادیر برابر

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

$$\cos 150^\circ = -\frac{\sqrt{3}}{2}, \cos 210^\circ = -\frac{\sqrt{3}}{2}$$

$$\frac{\sqrt{3}}{2} \text{ یا } 150^\circ \text{ (ب)}$$

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

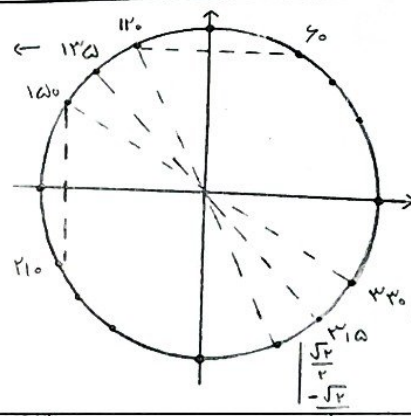
$$\cot 225^\circ = -1$$

مقادیر برابر

$$\tan 225^\circ = \frac{\sin 225^\circ}{\cos 225^\circ} = -\frac{\sqrt{3}}{3}$$

$$\tan 150^\circ = -\frac{\sqrt{3}}{3}$$

جواب: $\frac{\sqrt{3}}{3}$ یا 150°



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$$\frac{r}{r} = \frac{x}{120} \rightarrow x = \frac{120 \times r}{120} = 120^\circ$$

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

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

$$\frac{11}{5} = \frac{x}{120} \rightarrow x = \frac{120 \times 11}{5} = 264^\circ$$

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

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

$\downarrow \quad \downarrow$
 $\frac{4\pi}{3} \quad \frac{5\pi}{2}$

$$\frac{v}{e} = \frac{x}{120} \rightarrow x = \frac{120 \times v}{e} = 315^\circ$$

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

$$\cot 210^\circ = \frac{\cos 210^\circ}{\sin 210^\circ} = \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = -\sqrt{3}$$

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

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