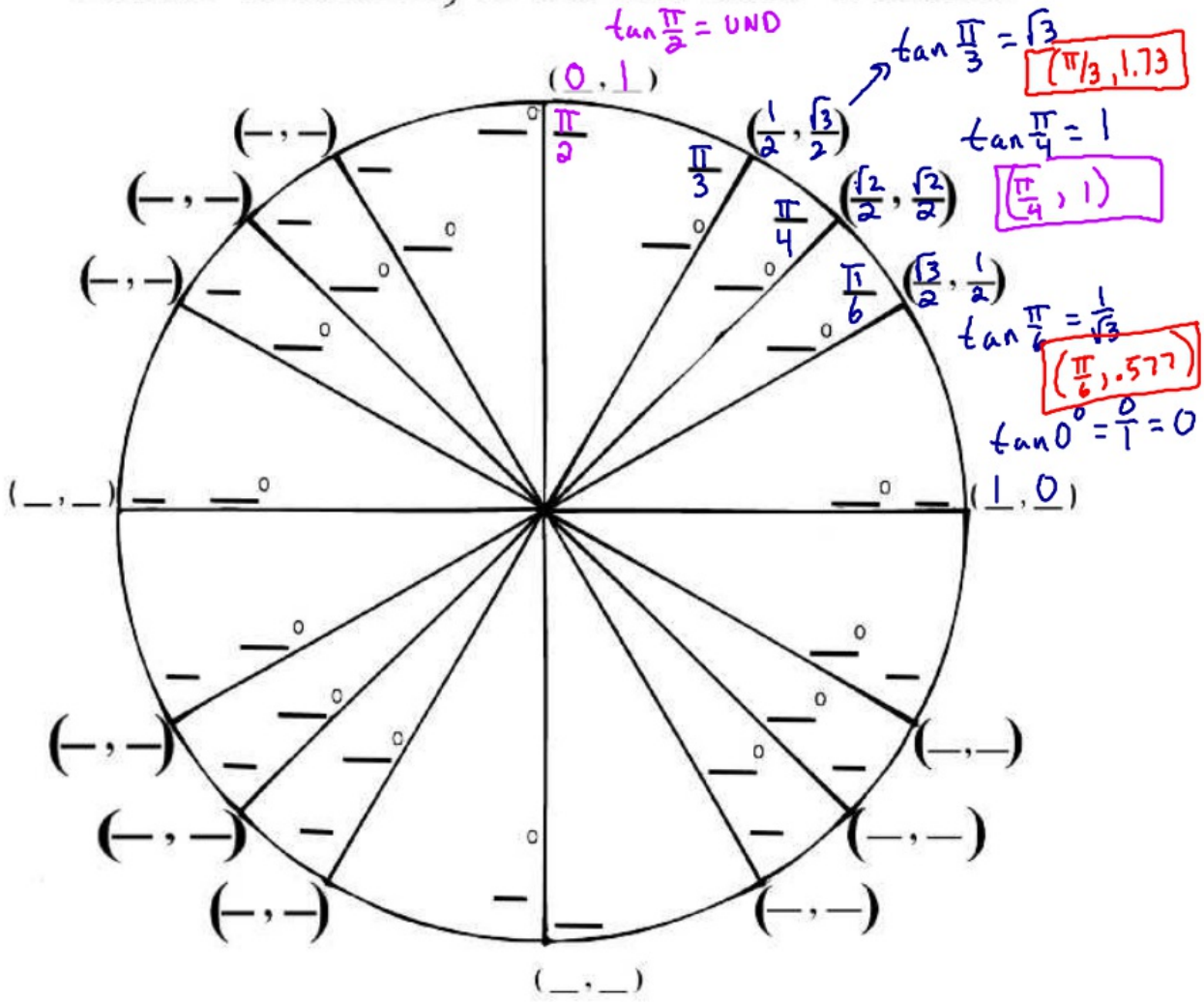
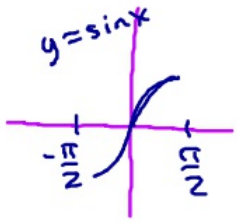
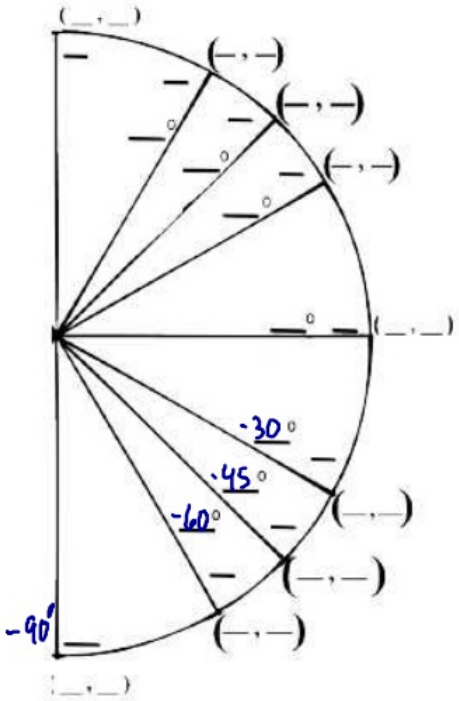
Unit Circle, Fill in the blank

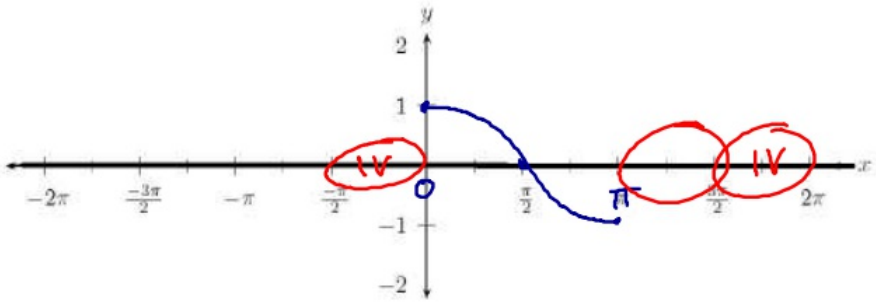




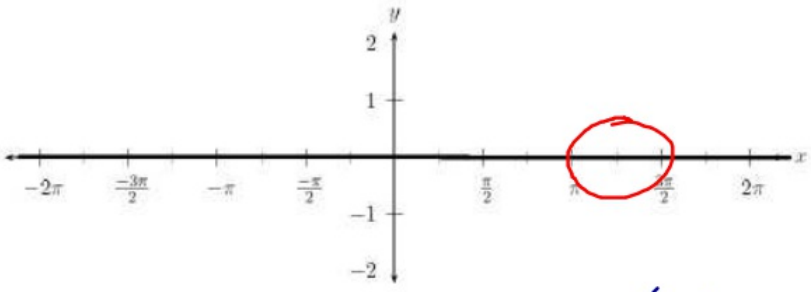
The Unit Circle and Inverse Functions



The graph of y = cos x



The graph of $y = \cos^{-1} x = \arccos x$

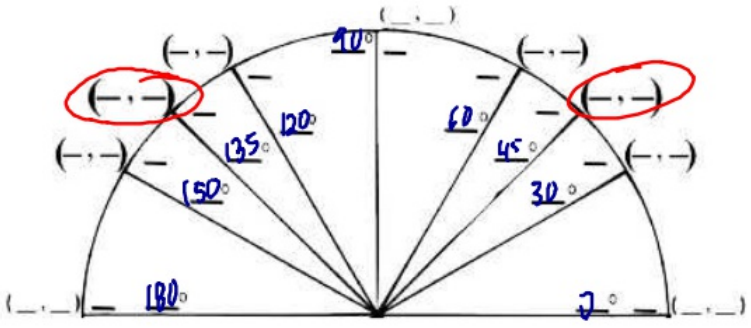


$\cos 45^0 = \frac{\sqrt{2}}{2}$ $\cos^{-1}\left(\frac{\sqrt{2}}{2}\right) = 45^\circ$

The Unit Circle and Inverse Functions

$\cos^{-1}\left(-\frac{\sqrt{2}}{2}\right) = -45^\circ$

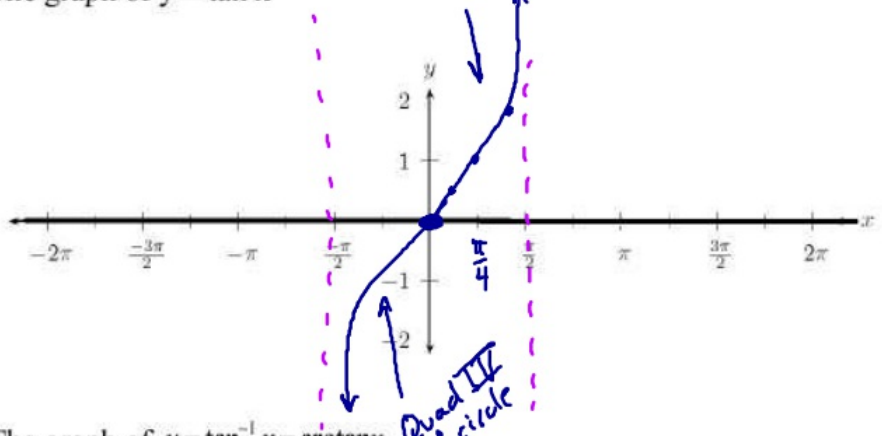
$= 135^\circ$



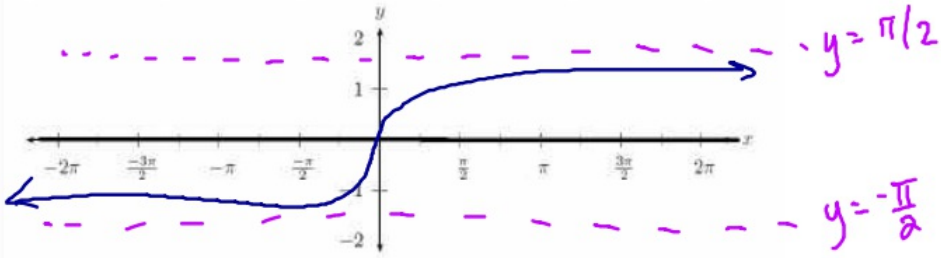
$\tan\theta = \frac{y}{x}$

The graph of y = tan x

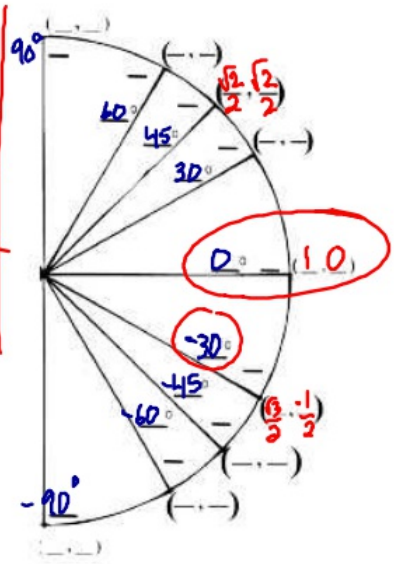
Quad I of circle



The graph of $y = \tan^{-1} x = \arctan x$



	sinθ	cosθ	tanθ
30	1/2	√3/2	1/√3
45	√2/2	√2/2	1
60	√3/2	1/2	√3



Find the exact value

A) $\cos^{-1}\frac{\sqrt{3}}{2}$

B) $\cos^{-1}\frac{1}{2}$

C) $\cos^{-1}\left(\frac{-1}{2}\right)$

D) $\sin^{-1}\frac{-\sqrt{3}}{2}$

E) $\sin^{-1}\frac{1}{2}$

F) $\sin^{-1}\left(\frac{1}{\sqrt{2}}\right)$

G) $\tan^{-1}(1) = 45^\circ = \frac{\pi}{4}$

Find the angle when y and x are the same

H) $\tan^{-1}(\sqrt{3}) = 60^\circ = \frac{\pi}{3}$

Find the angle when $\frac{y}{x} = \sqrt{3} = \frac{\sqrt{3}/2}{1/2}$

I) $\tan^{-1}\left(\frac{-1}{\sqrt{3}}\right) \rightarrow 30^\circ \rightarrow \pi/6$

Find the angle when $\frac{y}{x} = \frac{-1}{\sqrt{3}} = \frac{-1/2}{\sqrt{3}/2}$ simplified

J) $\cos^{-1}(0)$

K) $\sin^{-1}(-1)$

L) $\tan^{-1}(0) = 0$

Find the angle when $\frac{y}{x} = 0 \rightarrow \frac{0}{1}$ (1,0)