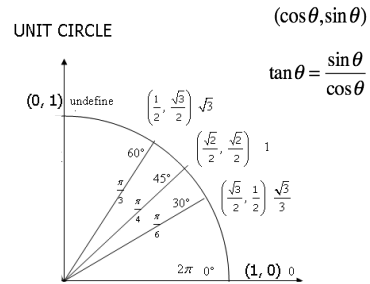


12-4 Trig Review

Objectives:

- I can evaluate an inverse trig function
- I can graph the trig parent functions



Inverse relations: switch domain and range values or input and output values

$$\sin\left(\frac{\pi}{4}\right) = \frac{\sqrt{2}}{2} \quad \sin^{-1}\left(\frac{\sqrt{2}}{2}\right) = \frac{\pi}{4}$$

Evaluate the following

$$\sin^{-1}\left(\frac{\sqrt{3}}{2}\right) \quad \csc^{-1}(-2)$$

$$\cos^{-1}\left(-\frac{1}{2}\right) \quad \sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$$

$$\tan^{-1}(\text{und}) \quad \cot^{-1}\left(\frac{1}{\sqrt{3}}\right)$$

Find the angle that satisfies the following

$$\cos \theta = -\frac{\sqrt{3}}{2}; \quad 0 \leq \theta \leq \pi$$

$$\tan \theta = -\frac{\sqrt{3}}{3}; \quad -\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$$

$$\sin \theta = -\frac{\sqrt{3}}{2}; \quad -\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$$

Find $f\left(g\left(\frac{\pi}{4}\right)\right)$ given that $f(\theta) = \sin^{-1} \theta$

and $g(\theta) = \cos \theta$ and $-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$

12-4

Find $g\left(f\left(-\sqrt{3}\right)\right)$ given that $f(\theta) = \tan^{-1} \theta$
 and $g(\theta) = \cos \theta$ and $\pi \leq \theta \leq 2\pi$

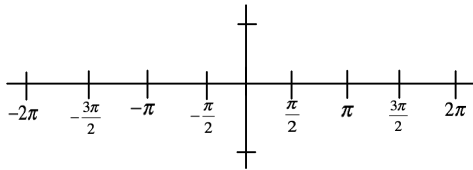
Connection between unit circle and trig graph

Video of sin graph and unit circle:

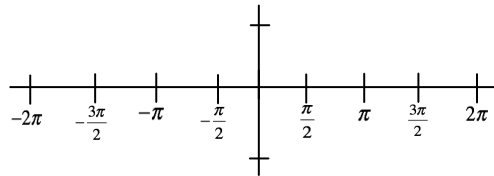
 [s://www.youtube.com/watch?v=Ohp6Okk_tww](https://www.youtube.com/watch?v=Ohp6Okk_tww)

Parent Functions

$y = \sin x$



$y = \tan x$



$y = \cos x$

