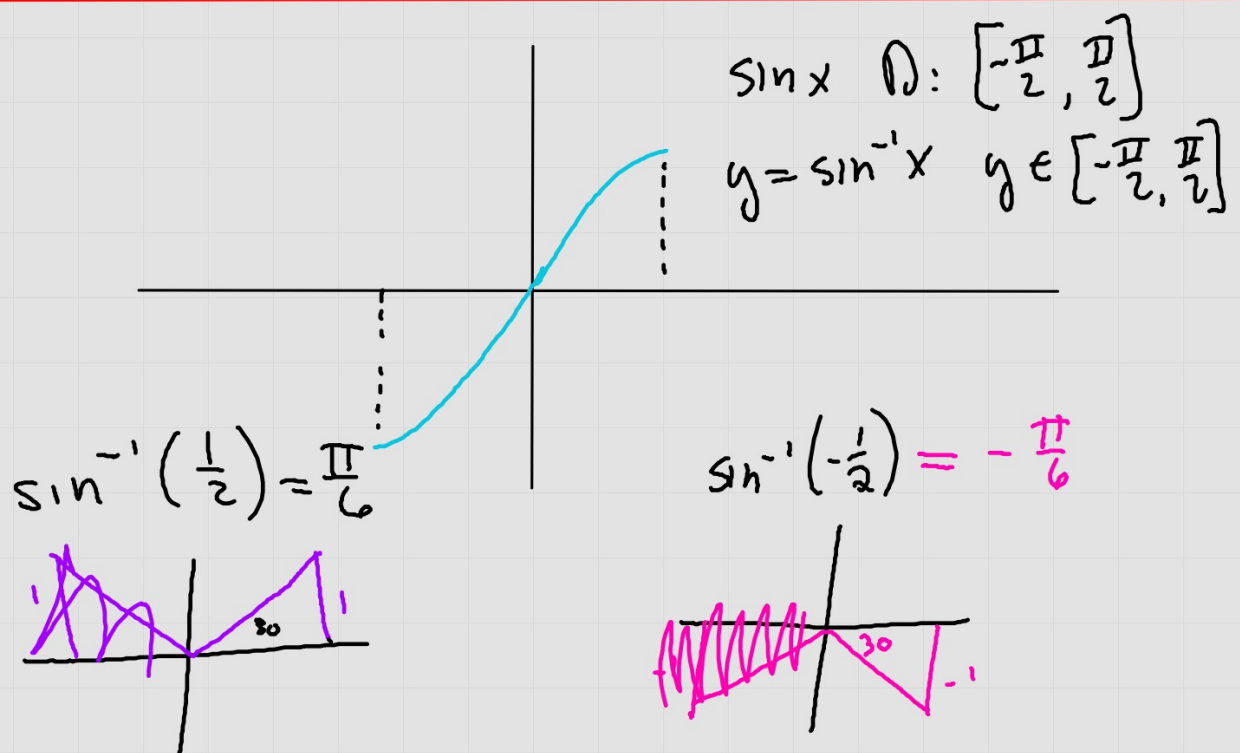


Inverse Trigonometric Functions

A Quick Review



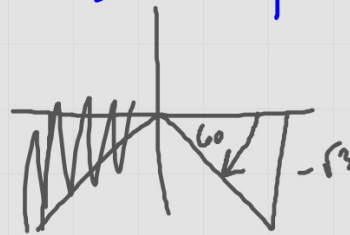
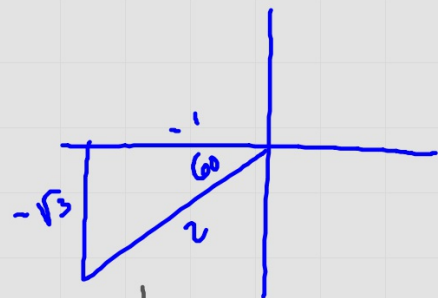
$$\sin(\sin^{-1} x) = x \quad x \in [-1, 1]$$

$$\sin^{-1}(\sin x) = x \quad x \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$$

$$\sin^{-1}\left(\sin \frac{\pi}{6}\right) = \frac{\pi}{6}$$

$$\sin^{-1}\left(\sin \frac{4\pi}{3}\right)$$

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



$$\cos x \quad D: [0, \pi]$$

$$y = \cos^{-1}(x) \quad y \in [0, \pi]$$

$$\cos(\cos^{-1}(x)) = x \quad x \in [-1, 1]$$

$$\cos^{-1}(\cos(x)) = x \quad x \in [0, \pi]$$

$$\tan x \text{ D: } \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$$

$$y = \tan^{-1} x \quad y \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$$

$$\tan(\tan^{-1} x) = x \quad x \in (-\infty, \infty)$$

$$\tan^{-1}(\tan x) = x \quad x \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$$

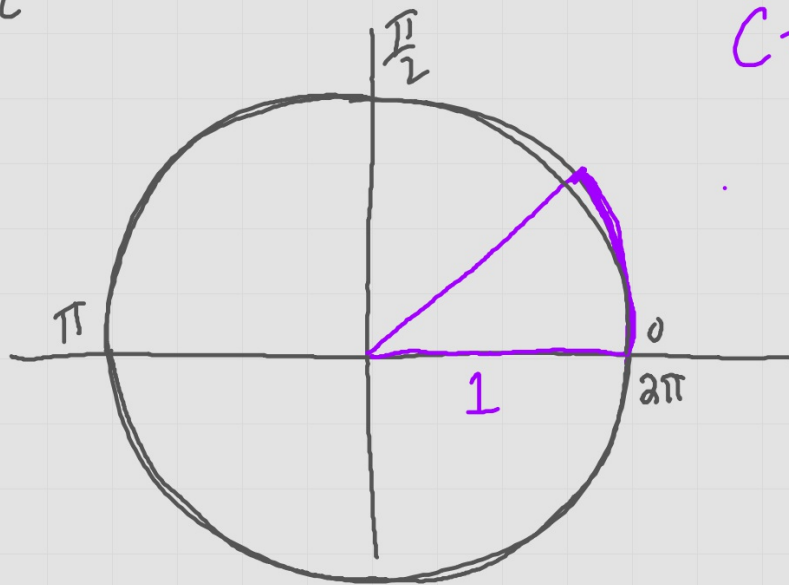
$$\sin^{-1} x$$

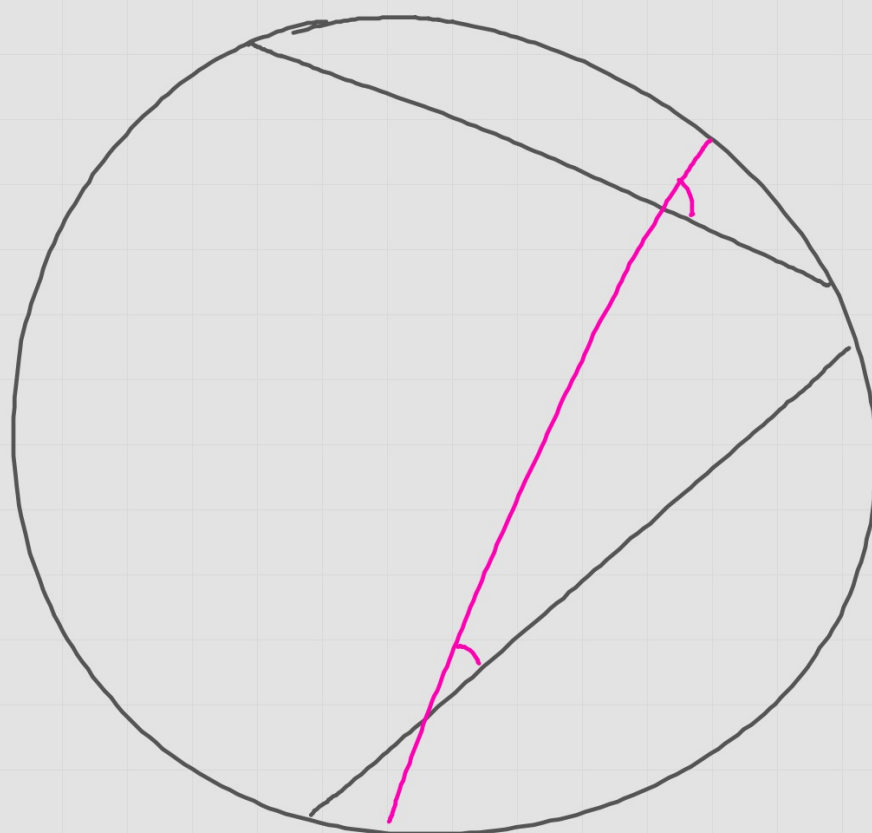
$$\underline{\arcsin(x)}$$

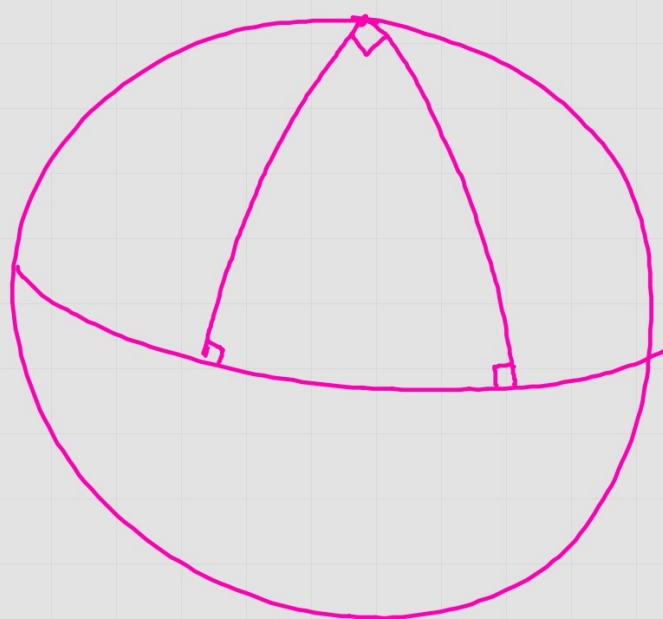
$$\sin^{-1} \frac{1}{2}$$

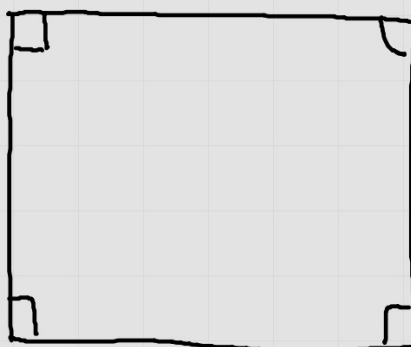
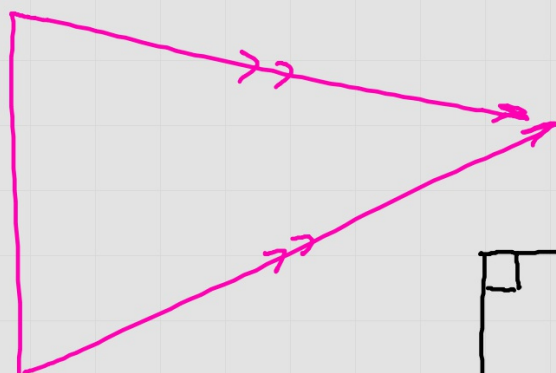
$$C = 2\pi(t)$$

$$C = 2\pi$$

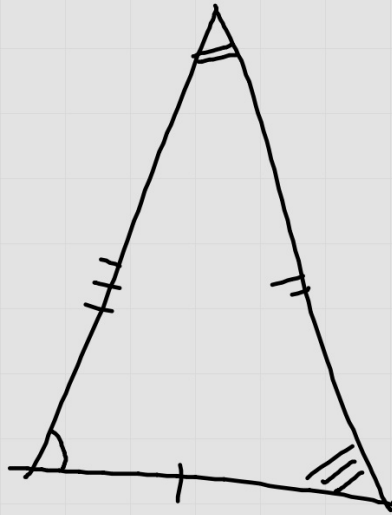
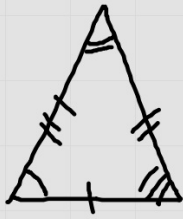








AAA



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