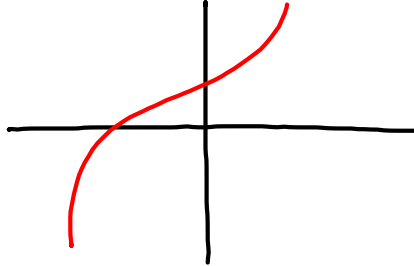


## Warm Up

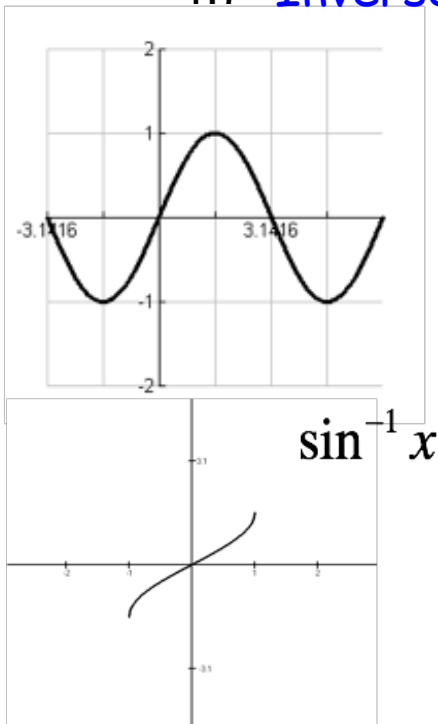
1. Find the inverse GRAPHICALLY.



2. Find the inverse ALGEBRAICALLY.

$$f(x) = 2x + 3$$

## 4.7 Inverse Trig Functions

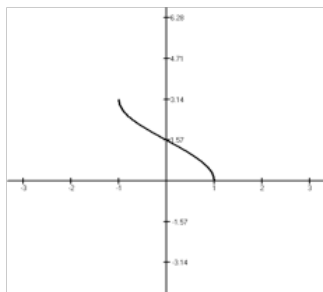


$$\sin \theta = x \xrightarrow{\text{inverse}} \sin^{-1}(x) = \theta$$

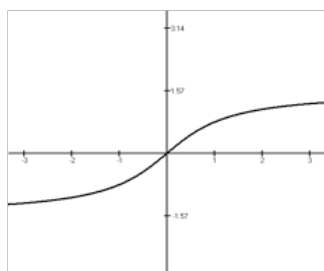
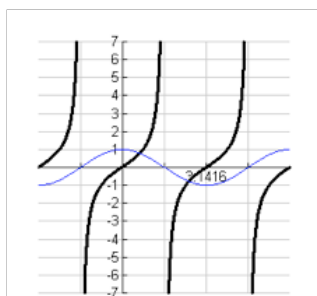
$$\rightarrow \arcsin(x) = \theta$$

# Inverse Cosine

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



# Inverse Tangent



## Evaluating Inverse Functions

$$\sin^{-1}\left(\frac{1}{2}\right) = 150^\circ, 30^\circ$$

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

undefined

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

$$\tan^{-1}(\sqrt{3})$$

Use your calculator in radian mode to evaluate this inverse function

$$\sin^{-1}(-0.81)$$

$$-0.94$$

Use your calculator in degree mode to evaluate this inverse function

$$\tan^{-1}(22.8)$$

$$87.5^\circ$$

## Composing Trigonometric Functions

