

6-8

NAME _____ DATE _____ PERIOD _____

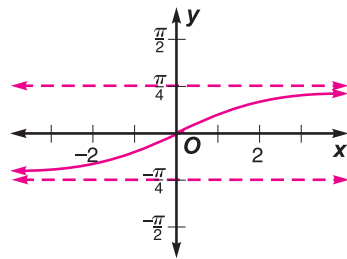
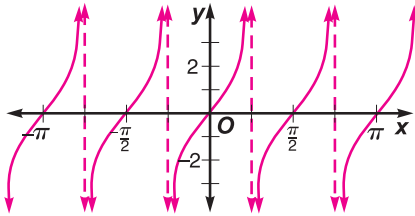
Practice

Trigonometric Inverses and Their Graphs

Write the equation for the inverse of each function. Then graph the function and its inverse.

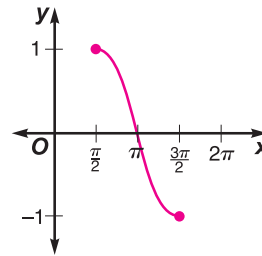
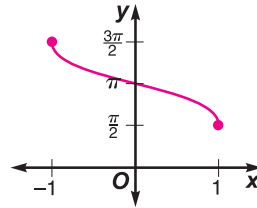
1. $y = \tan 2x$

$$y = \frac{1}{2} \tan^{-1} x$$



2. $y = \frac{\pi}{2} + \text{Arccos } x$

$$y = \text{Cos} \left(x - \frac{\pi}{2} \right)$$



Find each value.

3. $\text{Arccos}(-1)$

$$\pi$$

4. $\text{Arctan } 1$

$$\frac{\pi}{4}$$

5. $\text{Arcsin} \left(-\frac{1}{2} \right)$

$$-\frac{\pi}{6}$$

6. $\text{Sin}^{-1} \frac{\sqrt{3}}{2}$

$$\frac{\pi}{3}$$

7. $\text{Cos}^{-1} \left(\sin \frac{\pi}{3} \right)$

$$\frac{\pi}{6}$$

8. $\tan \left(\text{Sin}^{-1} 1 - \text{Cos}^{-1} \frac{1}{2} \right)$

$$\frac{\sqrt{3}}{3}$$

9. **Weather** The equation $y = 10 \sin \left(\frac{\pi}{6}t - \frac{2\pi}{3} \right) + 57$ models the average monthly temperatures for Napa, California. In this equation, t denotes the number of months with January represented by $t = 1$. During which two months is the average temperature 62° ? **May and September**