



Evaluate without a calculator:

$$1. \sin\left(\frac{\pi}{6}\right) = \frac{1}{2}$$

$$2. \sec\left(\frac{\pi}{4}\right)$$

$$3. \tan\left(\frac{\pi}{3}\right) = \sqrt{3}$$

$$4. \csc\left(\frac{4\pi}{3}\right)$$

$$5. \cos\left(\frac{7\pi}{4}\right) = \frac{\sqrt{2}}{2}$$

Find the angle that satisfies the following equations:

$$6. \cos\theta = \frac{1}{2}; 0 \leq \theta \leq \pi$$

$$7. \tan\theta = \sqrt{3}; -\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$$

$$8. \sin\theta = -\frac{\sqrt{2}}{2}; -\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}$$

$$\theta = \frac{\pi}{3}$$

Evaluate without a calculator:

$$9. \sin \frac{\pi}{3}$$

$$10. \cos \frac{3\pi}{4}$$

$$11. \csc \frac{-15\pi}{4}$$

$$12. \tan \left( \frac{\pi}{3} \right)$$

$$13. \sec \frac{5\pi}{6}$$

$$\approx -\sqrt{2}/2$$

$$\approx \sqrt{3}$$

Review:

1. If  $\cos \theta = \frac{5}{7}$  find all other trig identities.

2. Mr. Myrup is hanging Christmas lights. He places his 12 foot ladder at a  $23^0$  angle with the ground. How far way is the ladder from the house?