

Evaluating Trig Functions at a Given Angle on the Unit Circle Practice Problems

© 2016 Kuta Software LLC. All rights reserved.

Evaluate the 3 trig functions for each of the angles in standard position. No decimal approximations.

1) -270°

2) -210°

3) -90°

4) 300°

5) 360°

6) -240°

7) $\frac{5\pi}{4}$

8) $\frac{7\pi}{6}$

9) $\frac{\pi}{2}$

10) π

Answers to Evaluating Trig Functions at a Given Angle on the Unit Circle Practice Problem

$$1) \sin -270^\circ = 1 \quad \cos -270^\circ = 0 \quad \tan -270^\circ = \text{undefined}$$

$$2) \sin -210^\circ = \frac{1}{2} \quad \cos -210^\circ = -\frac{\sqrt{3}}{2} \quad \tan -210^\circ = -\frac{\sqrt{3}}{3}$$

$$3) \sin -90^\circ = -1 \quad \cos -90^\circ = 0 \quad \tan -90^\circ = \text{undefined}$$

$$4) \sin 300^\circ = \frac{1}{2} \quad \cos 300^\circ = -\frac{\sqrt{3}}{2} \quad \tan 300^\circ = -\sqrt{3}$$

$$5) \sin 360^\circ = 0 \quad \cos 360^\circ = 1 \quad \tan 360^\circ = 0$$

$$6) \sin -240^\circ = \frac{\sqrt{3}}{2} \quad \cos -240^\circ = -1/2 \quad \tan -240^\circ = -\sqrt{3}$$

$$7) \sin \frac{5\pi}{4} = -\frac{\sqrt{2}}{2} \quad \cos \frac{5\pi}{4} = -\frac{\sqrt{2}}{2} \quad \tan \frac{5\pi}{4} = 1$$

$$8) \sin \frac{7\pi}{6} = -\frac{1}{2} \quad \cos \frac{7\pi}{6} = -\frac{\sqrt{3}}{2} \quad \tan \frac{7\pi}{6} = \frac{\sqrt{3}}{3}$$

$$9) \sin \frac{\pi}{0} = 1 \quad \cos \frac{\pi}{2} = 0 \quad \tan \frac{\pi}{2} = \text{undefined}$$

$$10) \sin \pi = 0 \quad \cos \pi = -1 \quad \tan \pi = 0$$