

Using your unit circle, find the values of the following trig functions.

1) $\cos 30^\circ, \sin 30^\circ, \tan 30^\circ$
 $\cos 150^\circ, \sin 150^\circ, \tan 150^\circ$
 $\cos 210^\circ, \sin 210^\circ, \tan 210^\circ$
 $\cos 330^\circ, \sin 330^\circ, \tan 330^\circ$

2) $\cos 45^\circ, \sin 45^\circ, \tan 45^\circ$
 $\cos 135^\circ, \sin 135^\circ, \tan 135^\circ$
 $\cos 225^\circ, \sin 225^\circ, \tan 225^\circ$
 $\cos 315^\circ, \sin 315^\circ, \tan 315^\circ$

3) $\cos \frac{\pi}{3}, \sin \frac{\pi}{3}, \tan \frac{\pi}{3}$
 $\cos \frac{2\pi}{3}, \sin \frac{2\pi}{3}, \tan \frac{2\pi}{3}$
 $\cos \frac{4\pi}{3}, \sin \frac{4\pi}{3}, \tan \frac{4\pi}{3}$
 $\cos \frac{5\pi}{3}, \sin \frac{5\pi}{3}, \tan \frac{5\pi}{3}$

4) $\cos 0, \sin 0, \tan 0$
 $\cos \frac{\pi}{2}, \sin \frac{\pi}{2}, \tan \frac{\pi}{2}$
 $\cos \pi, \sin \pi, \tan \pi$
 $\cos \frac{3\pi}{2}, \sin \frac{3\pi}{2}, \tan \frac{3\pi}{2}$
 $\cos 2\pi, \sin 2\pi, \tan 2\pi$

5) Using the patterns you discovered about angles and the unit circle, evaluate the following trig. functions.

$\cos 390^\circ, \sin -150^\circ, \tan -30^\circ$
 $\cos -225^\circ, \sin 495^\circ, \tan -135^\circ$
 $\cos -120^\circ, \sin 420^\circ, \tan 480^\circ$

6) Find all the angles (θ) between 0° and 360° that would make the following equations true.

a) $\sin \theta = \frac{1}{2}$

b) $\tan \theta = \sqrt{3}$

c) $\cos \theta = -\frac{\sqrt{2}}{2}$