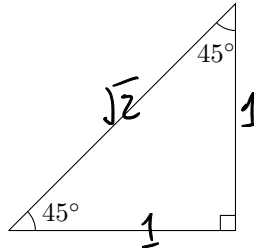
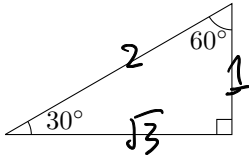


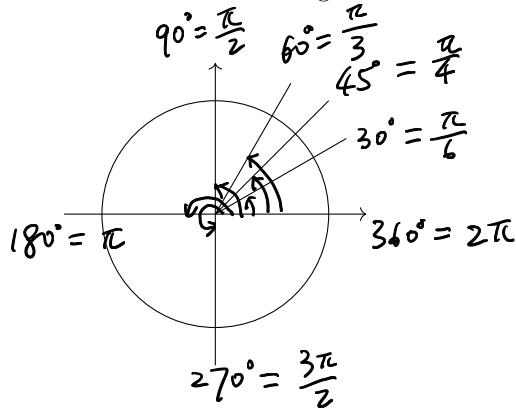
# MATH 2A/5A Prep: Trigonometric Values

## Facts to Know:

1. Special right triangles:

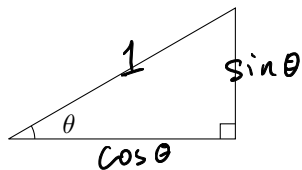


2. Radian measure of angles:

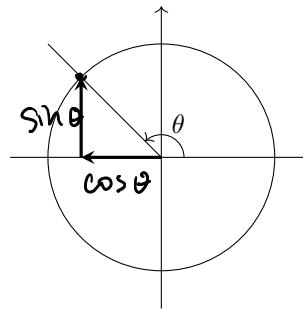


3. Definition of Trigonometric functions:

- $\sin \theta$  and  $\cos \theta$ :  
( $0 < \theta < \frac{\pi}{2}$ )



(general  $\theta$ )



"↑" or "→", positive  
"↓" or "←", negative.

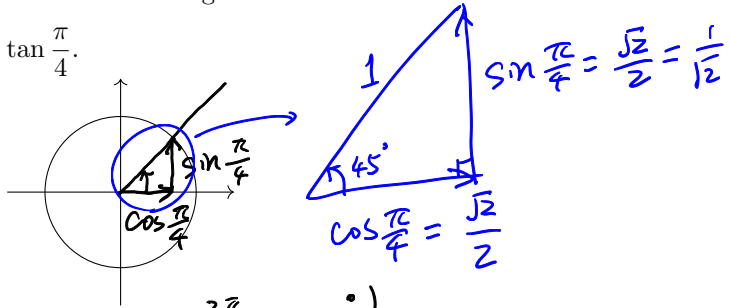
•  $\tan \theta = \frac{\sin \theta}{\cos \theta}$  ,  $\cot \theta = \frac{\cos \theta}{\sin \theta}$

•  $\sec \theta = \frac{1}{\cos \theta}$  ,  $\csc \theta = \frac{1}{\sin \theta}$

## Examples:

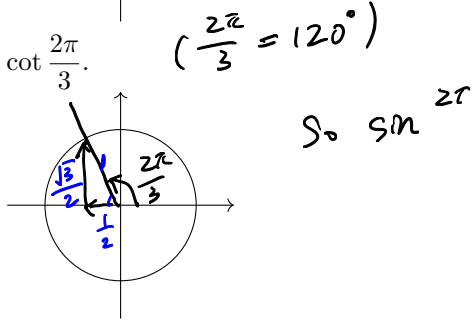
1. Calculate the following values:

(a)  $\tan \frac{\pi}{4}$ .

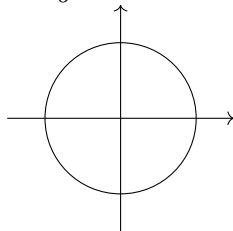


$$\Rightarrow \tan \frac{\pi}{4} = \frac{\sin \frac{\pi}{4}}{\cos \frac{\pi}{4}} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$$

(b)  $\cot \frac{2\pi}{3}$ .



(c)  $\sec \frac{7\pi}{6}$ .



(d)  $\csc \frac{11\pi}{2}$ .

