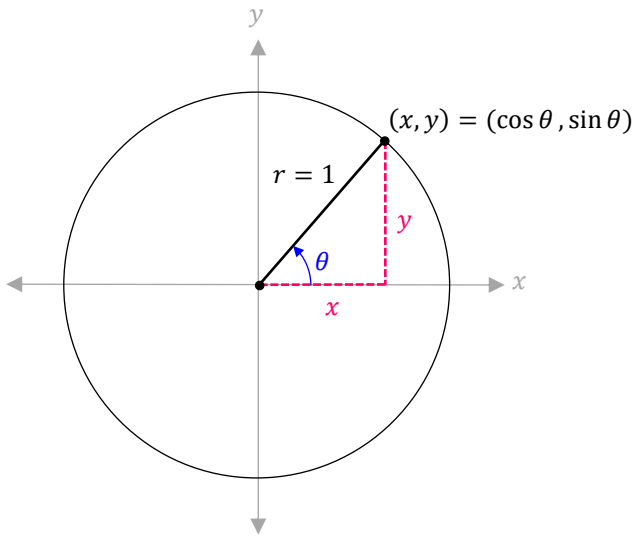
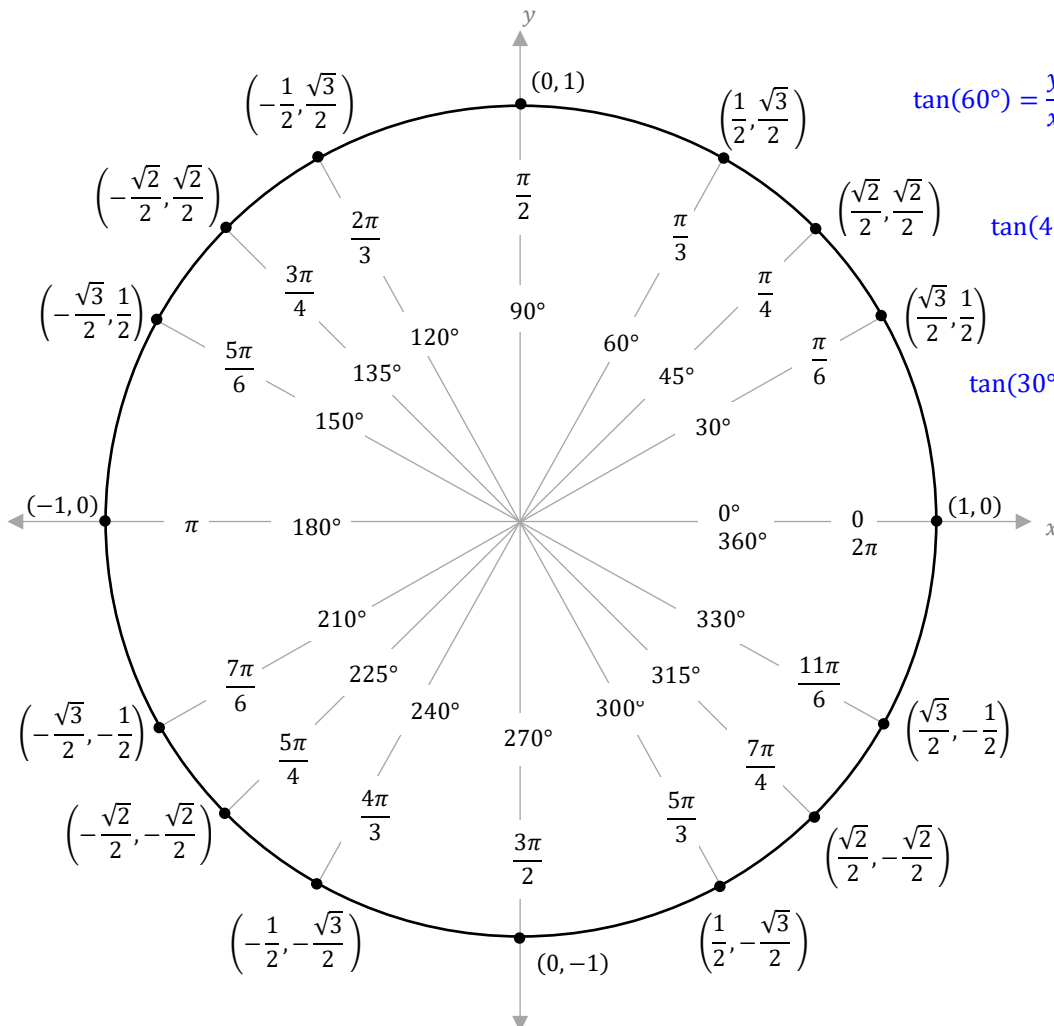


Unit Circle – circle with radius of 1, centered at the origin.



Trig functions:	radius = 1 on the unit circle, so on the unit circle:
$\sin \theta = \frac{y}{r} = \frac{\text{opp}}{\text{hyp}}$	$\sin \theta = y$
$\cos \theta = \frac{x}{r} = \frac{\text{adj}}{\text{hyp}}$	$\cos \theta = x$
$\tan \theta = \frac{y}{x} = \frac{\text{opp}}{\text{adj}}$	$\tan \theta = \frac{y}{x}$
$\csc \theta = \frac{1}{\sin \theta} = \frac{r}{y}$	$\csc \theta = \frac{1}{y}$
$\sec \theta = \frac{1}{\cos \theta} = \frac{r}{x}$	$\sec \theta = \frac{1}{x}$
$\cot \theta = \frac{1}{\tan \theta} = \frac{x}{y}$	$\cot \theta = \frac{x}{y}$



$$\tan(60^\circ) = \frac{y}{x} = \frac{\sqrt{3}/2}{1/2} = \frac{\sqrt{3}}{2} \times \frac{2}{1} = \sqrt{3}$$

$$\tan(45^\circ) = \frac{y}{x} = \frac{\sqrt{2}/2}{\sqrt{2}/2} = 1$$

$$\tan(30^\circ) = \frac{y}{x} = \frac{1/2}{\sqrt{3}/2} = \frac{1}{2} \times \frac{2}{\sqrt{3}} = \frac{1}{\sqrt{3}}$$

$$= \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

rationalize denominator