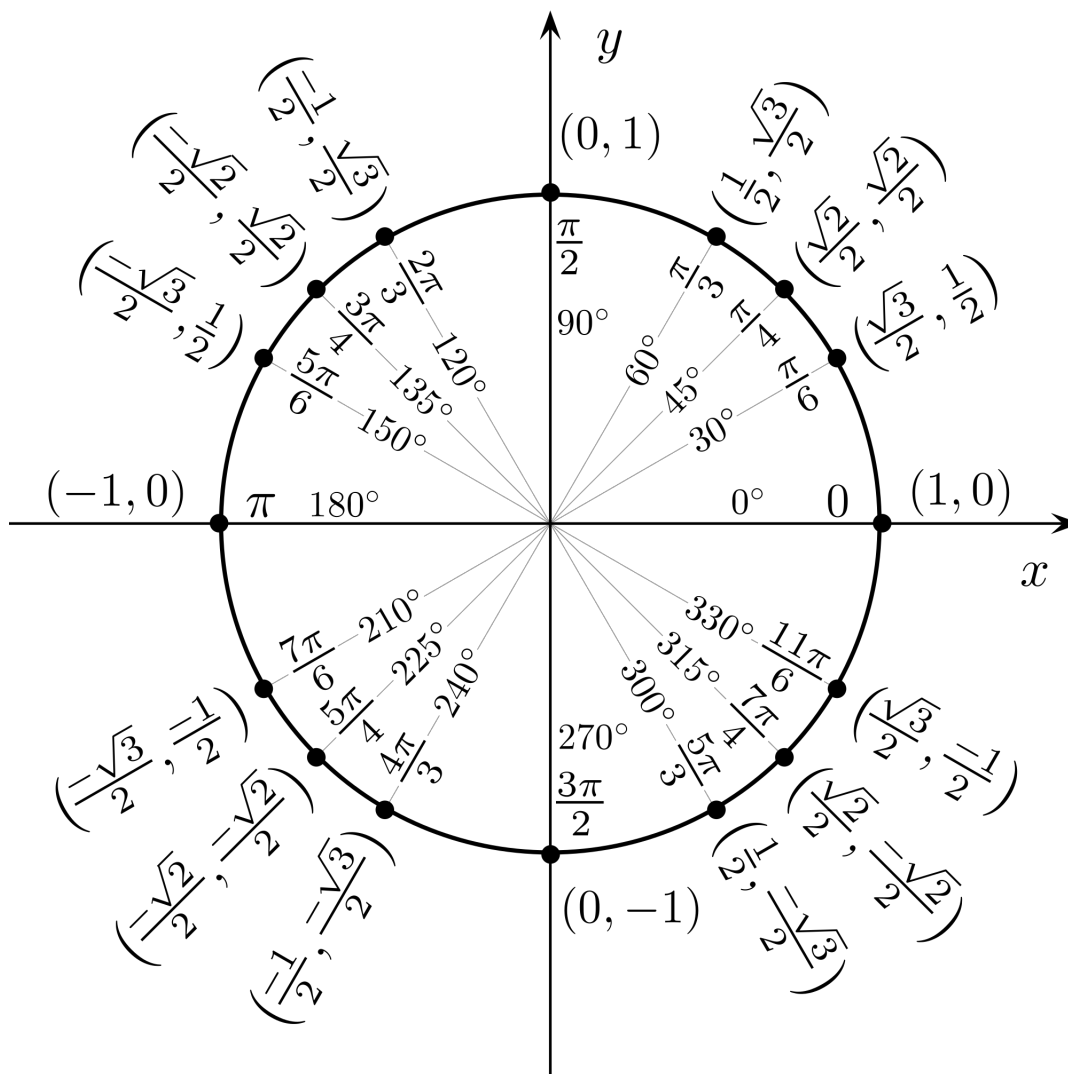




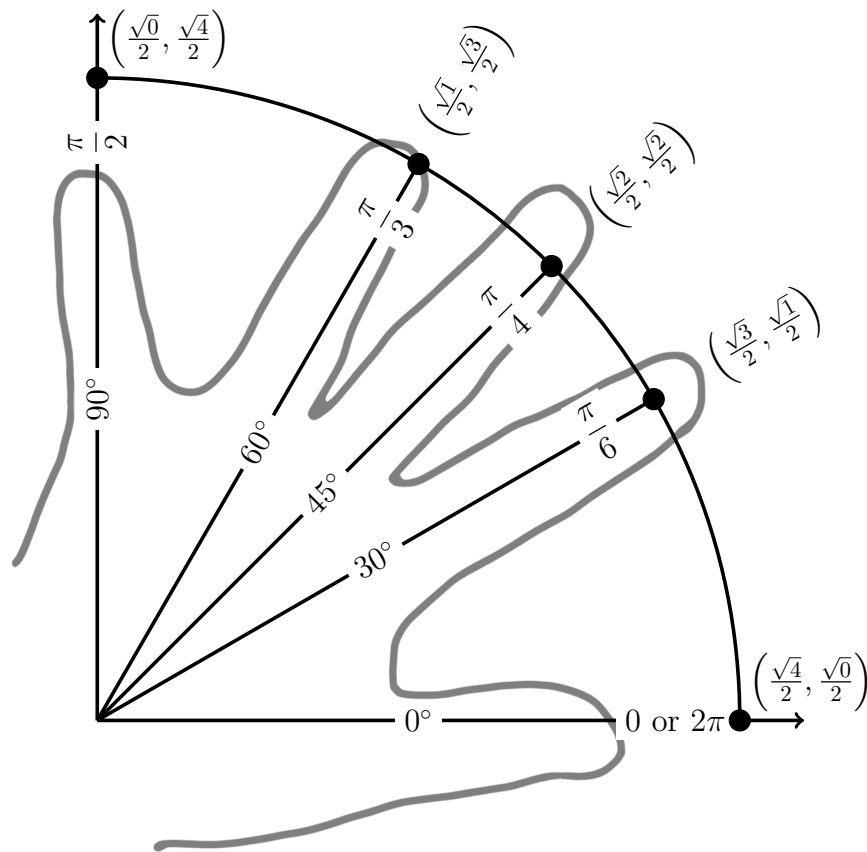
U of I MAC Handouts: The Unit Circle 3 Ways

Graphically



The values from the first quadrant are replicated (with sign changes) in the other three quadrants.

Left Hand Rule



Note the pattern of the numerators and denominators. The denominator is always 2. The numerator is always a square root. Starting with the little finger, the x value (or \cos value) starts with zero under the root and counts up to four. The y value (or \sin value) starts at four under the root and counts down to zero.

A Table

x	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
$\sin x$	$\frac{\sqrt{0}}{2}$	$\frac{\sqrt{1}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{4}}{2}$
$\cos x$	$\frac{\sqrt{4}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{1}}{2}$	$\frac{\sqrt{0}}{2}$