Unit Circle
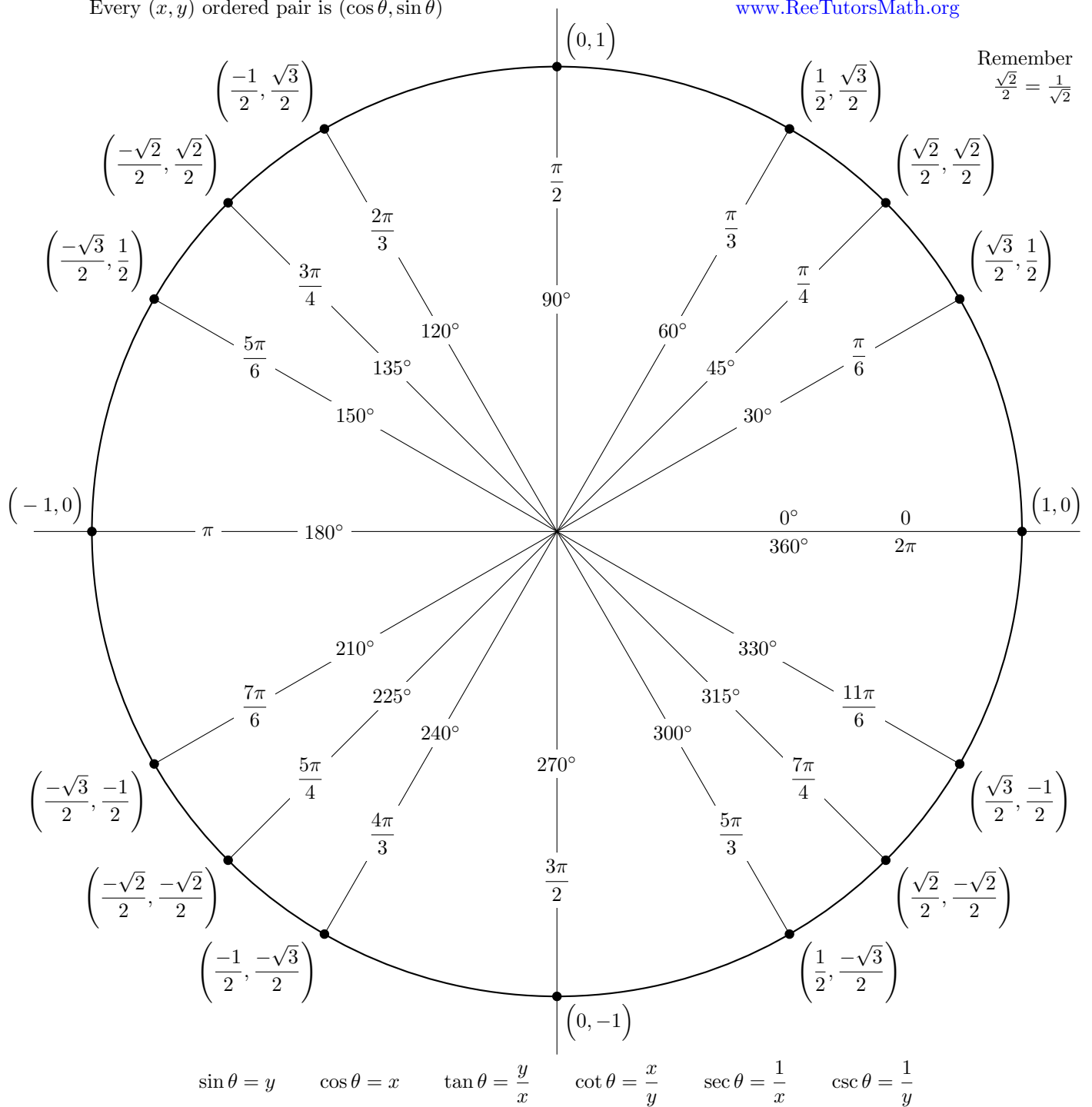
Every (x, y) ordered pair is $(\cos\theta, \sin\theta)$

Remember
$\frac{\sqrt{2}}{2} = \frac{1}{\sqrt{2}}$

$\left(0, 1\right)$ — $\frac{\pi}{2}$ — $90°$

$\left(\frac{-1}{2}, \frac{\sqrt{3}}{2}\right)$ — $\frac{2\pi}{3}$ — $120°$

$\left(\frac{-\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$ — $\frac{3\pi}{4}$ — $135°$

$\left(\frac{-\sqrt{3}}{2}, \frac{1}{2}\right)$ — $\frac{5\pi}{6}$ — $150°$

$\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$ — $\frac{\pi}{3}$ — $60°$

$\left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$ — $\frac{\pi}{4}$ — $45°$

$\left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$ — $\frac{\pi}{6}$ — $30°$

$\left(-1, 0\right)$ — π — $180°$

$\left(1, 0\right)$ — $0°$ $360°$ — 0 2π

$\left(\frac{-\sqrt{3}}{2}, \frac{-1}{2}\right)$ — $\frac{7\pi}{6}$ — $210°$

$\left(\frac{-\sqrt{2}}{2}, \frac{-\sqrt{2}}{2}\right)$ — $\frac{5\pi}{4}$ — $225°$

$\left(\frac{-1}{2}, \frac{-\sqrt{3}}{2}\right)$ — $\frac{4\pi}{3}$ — $240°$

$\left(0, -1\right)$ — $\frac{3\pi}{2}$ — $270°$

$\left(\frac{1}{2}, \frac{-\sqrt{3}}{2}\right)$ — $\frac{5\pi}{3}$ — $300°$

$\left(\frac{\sqrt{2}}{2}, \frac{-\sqrt{2}}{2}\right)$ — $\frac{7\pi}{4}$ — $315°$

$\left(\frac{\sqrt{3}}{2}, \frac{-1}{2}\right)$ — $\frac{11\pi}{6}$ — $330°$

$$\sin\theta = y \qquad \cos\theta = x \qquad \tan\theta = \frac{y}{x} \qquad \cot\theta = \frac{x}{y} \qquad \sec\theta = \frac{1}{x} \qquad \csc\theta = \frac{1}{y}$$

Quadrant 1 Tangents

$$\begin{array}{rclc}
\tan(0) & = & \tan(0°) & = & 0 \\
\tan(\pi/6) & = & \tan(30°) & = & \left(\frac{1}{\sqrt{3}}\right) = \left(\frac{\sqrt{3}}{3}\right) \\
\tan(\pi/4) & = & \tan(45°) & = & 1 \\
\tan(\pi/3) & = & \tan(60°) & = & \sqrt{3} \\
\tan(\pi/2) & = & \tan(90°) & \text{is} & \text{undefined}
\end{array}$$