



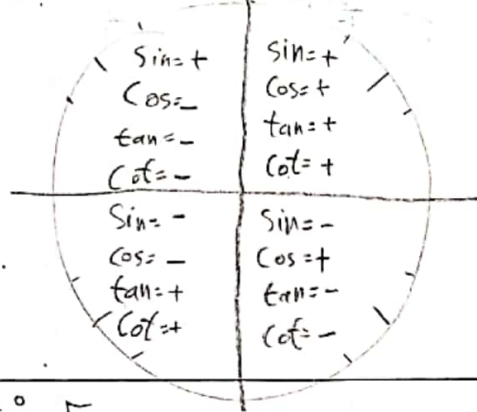
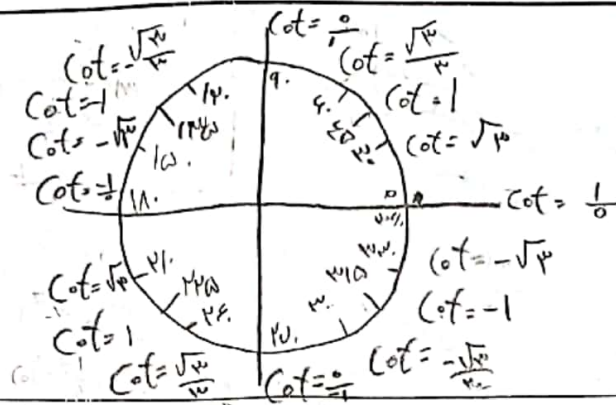
A hand-drawn unit circle diagram with a vertical y-axis and a horizontal x-axis. The circle is divided into four quadrants. Various angles are marked around the circle, and their corresponding tangent values are written next to them. The values are as follows:

- At 0° (positive x-axis): $\tan = 0$
- At 45° (first quadrant): $\tan = 1$
- At 90° (positive y-axis): $\tan = \infty$ (written as $\frac{\infty}{1}$)
- At 135° (second quadrant): $\tan = -1$
- At 180° (negative x-axis): $\tan = 0$
- At 225° (third quadrant): $\tan = 1$
- At 270° (negative y-axis): $\tan = -\infty$ (written as $\frac{-\infty}{1}$)
- At 315° (fourth quadrant): $\tan = -1$

Additional labels include $\tan = \frac{1}{\sqrt{x}}$ near the top right and $\tan = \frac{\sqrt{x}}{1}$ near the bottom right. The diagram is drawn on lined paper.

$$\begin{aligned}\tan &= \frac{\sqrt{3}}{3} \\ \tan &= 1 \\ \tan &\leq \sqrt{3}\end{aligned}$$

$$\cot = \frac{\cos}{\sin} = \frac{x}{y}$$



$$\sin 12^\circ = \frac{\sqrt{3}}{2} = \sin 90^\circ = \frac{\sqrt{3}}{2}$$

$$\cos 120^\circ = -\frac{\sqrt{3}}{2} = \cos 180^\circ = -\frac{\sqrt{3}}{2}$$

$$\tan = \frac{\sin}{\cos} = \frac{y}{x} \Rightarrow \tan 135^\circ = \frac{-\frac{1}{2}}{\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}} = \tan 150^\circ = \frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$$

$$\cot = \frac{\cos}{\sin} = \frac{x}{y} \Rightarrow \cot 135^\circ = \frac{-\frac{\sqrt{3}}{2}}{\frac{1}{2}} = -\sqrt{3} = \cot 150^\circ = \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = -\sqrt{3}$$

$$-\cos \frac{4\pi}{3} = \frac{1}{2} = \sin \frac{5\pi}{6} = \sin \frac{\pi}{6}$$

$$-\cos \frac{11\pi}{6} = -\frac{\sqrt{3}}{2} = \sin \frac{7\pi}{6} = \sin \frac{5\pi}{6}$$

$$\cot \frac{5\pi}{6} = \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = -\sqrt{3} = \cos \pi$$

$$-\cos 120^\circ = \frac{\sqrt{3}}{2} = \sin 90^\circ = \sin 180^\circ$$