

S-4

Unit Circle in Radians

Skull ✓

Same work, different numbers. Get comfortable with fractions, we're going to be using these for months. Get out your unit circles from yesterday.

★ Put in radians on screen ★

Fill in radians, compare to counting by 30's, etc. Talk about counting by $\frac{1}{6}$ and simplifying.

$$\sin \theta = y$$

$$\cos \theta = x$$

$$\tan \theta = \frac{y}{x}$$

$$\csc \theta = \text{recip. sin}$$

$$\sec \theta = \text{recip. cos}$$

$$\cot \theta = \text{recip. tan}$$

$$1) \sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2}$$

$$2) \cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2}$$

$$3) \tan \frac{5\pi}{3} = \frac{-\sqrt{3}/2}{1/2} = -\sqrt{3}$$

$$4) \cot \frac{5\pi}{3} = \frac{1}{-\sqrt{3}} = \frac{\sqrt{3}}{-3} = -\frac{\sqrt{3}}{3}$$

$$5) \cos \frac{13\pi}{4} \xrightarrow{-2\pi} \cos \frac{5\pi}{4} = -\frac{\sqrt{2}}{2}$$

$$6) \sin \frac{-7\pi}{3} \xrightarrow{+2\pi + 2\pi} \sin \frac{5\pi}{3} = -\frac{\sqrt{3}}{2}$$

$$7) \cot \frac{11\pi}{4} \xrightarrow{-2\pi} \cot \frac{3\pi}{4} = \frac{-\sqrt{2}/2}{\sqrt{2}/2} = -1$$

cw/ctw - back of yesterday's

Unit Circle Quiz (take one)
Tomorrow!

↑ Explain