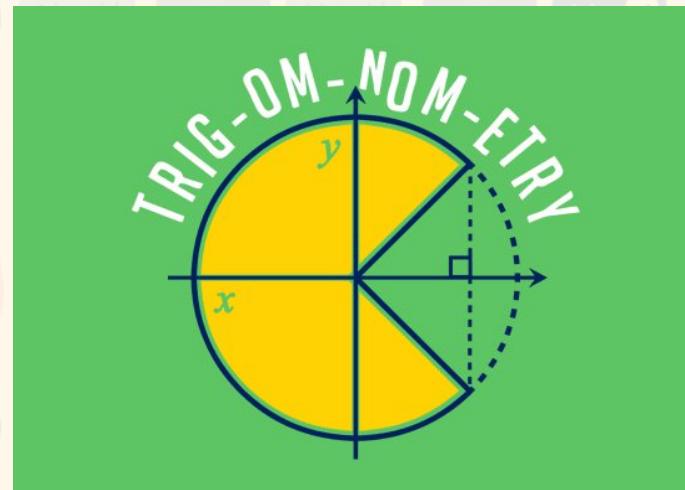


1.8 More Exact Values

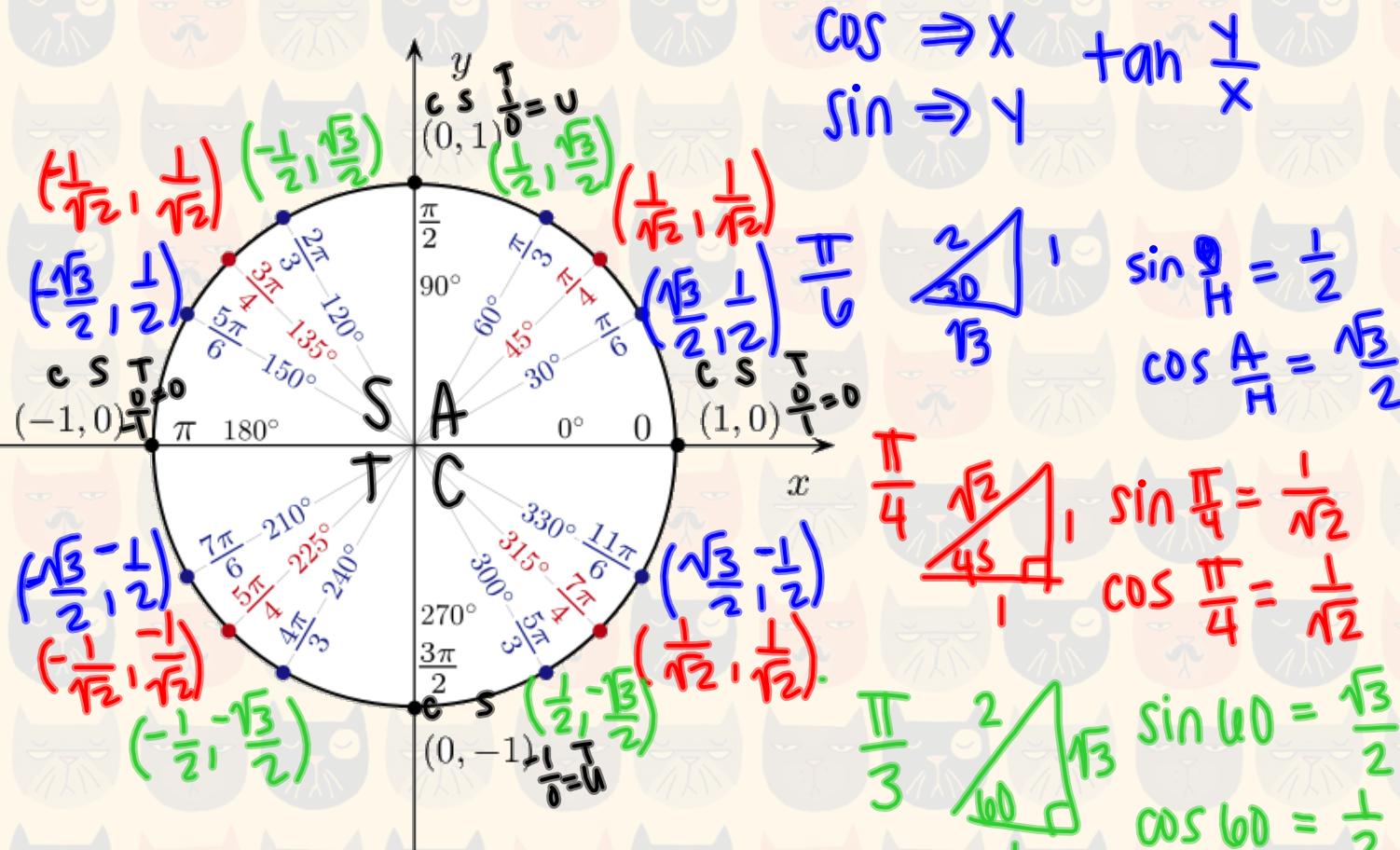
Essential Question:

How do I calculate the exact value of a given trig function?



1.8 More Exact Values

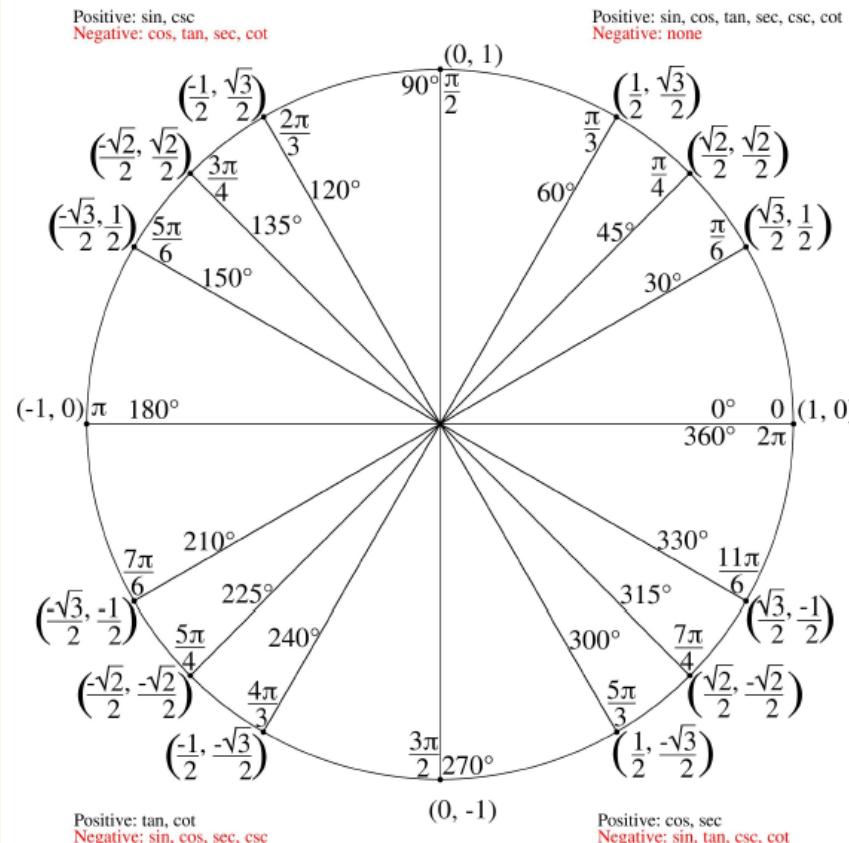
Essential Question: How do I calculate the exact values of a given trig function?



1.8 More Exact Values

Essential Question: How do I calculate the exact values of a given trig function?

The Unit Circle



1.8 More Exact Values

Essential Question:

How do I calculate the exact value of a given trig function?

TABLE 2 Values of Trig Functions for Various Quadrantal Angles

	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\cot \theta$	$\sec \theta$	$\csc \theta$
0°	0	1	0	undefined	1	undefined
90°	1	0	undefined	0	undefined	1
180°	0	-1	0	undefined	-1	undefined
270°	-1	0	undefined	0	undefined	-1

1.8 More Exact Values

Essential Question: How do I calculate the exact value of a given trig function?

$$\frac{\cos \frac{\pi}{6}}{\sin \frac{11\pi}{6}}$$

$$= -\sqrt{3}$$

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



$$\sin \frac{11\pi}{6} = -\frac{1}{2}$$



$$\frac{\sqrt{3}}{2} \div -\frac{1}{2} = \frac{\sqrt{3}}{2} \cdot -\frac{2}{1}$$

$$\cos^2 \frac{\pi}{4} + \sin^2 \frac{-\pi}{4}$$

~~$\cos \frac{\pi}{4}$~~ $\left(\frac{1}{\sqrt{2}}\right)^2 + \left(\frac{-1}{\sqrt{2}}\right)^2$

$$\frac{1}{2} + \frac{1}{2} = 1$$



$$\left(\cos \frac{\pi}{4}\right)^2 = \left(\frac{1}{\sqrt{2}}\right)^2$$



$$\sin \left(\frac{\pi}{4}\right) = \frac{-1}{\sqrt{2}}$$