

Name: _____ Date: 9/22/25

Warm-up: Write the 6 trig identities in terms of opposite, adjacent and hypotenuse. Use θ for your angle.

I'll start the first one!

order doesn't matter!

1. $\cos \theta = \frac{\text{adj}}{\text{hyp}}$

4. $\sec \theta = \frac{\text{hyp}}{\text{adj}}$

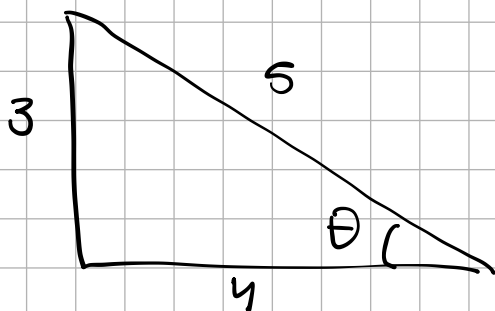
2. $\sin \theta = \frac{\text{opp}}{\text{hyp}}$

5. $\csc \theta = \frac{\text{hyp}}{\text{opp}}$

3. $\tan \theta = \frac{\text{opp}}{\text{adj}}$

6. $\cot \theta = \frac{\text{adj}}{\text{opp}}$

1) Find all 6 trig identities of the triangle below.



$$\sin \theta = \frac{3}{5}$$

$$\csc \theta = \frac{5}{3}$$

$$\cos \theta = \frac{4}{5}$$

$$\sec \theta = \frac{5}{4}$$

$$\tan \theta = \frac{3}{4}$$

$$\cot \theta = \frac{4}{3}$$

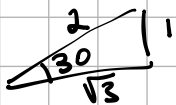
2) fill in the following table

radians	0	$\pi/6$	$\pi/4$	$\pi/3$	$\pi/2$	π	2π
degrees	0	30°	45°	60°	90°	180°	360°

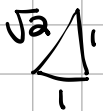
Very important to know these

3) Find the following values using your knowledge of the unit circle

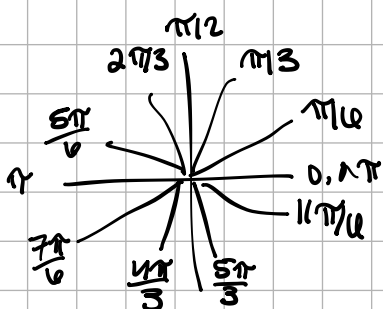
a) $\sin \pi/6 = \frac{1}{2}$



b) $\tan 45^\circ = 1$



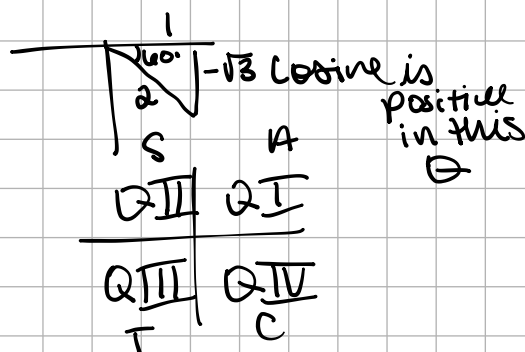
c) $\cos \frac{5\pi}{3} = \frac{1}{2}$



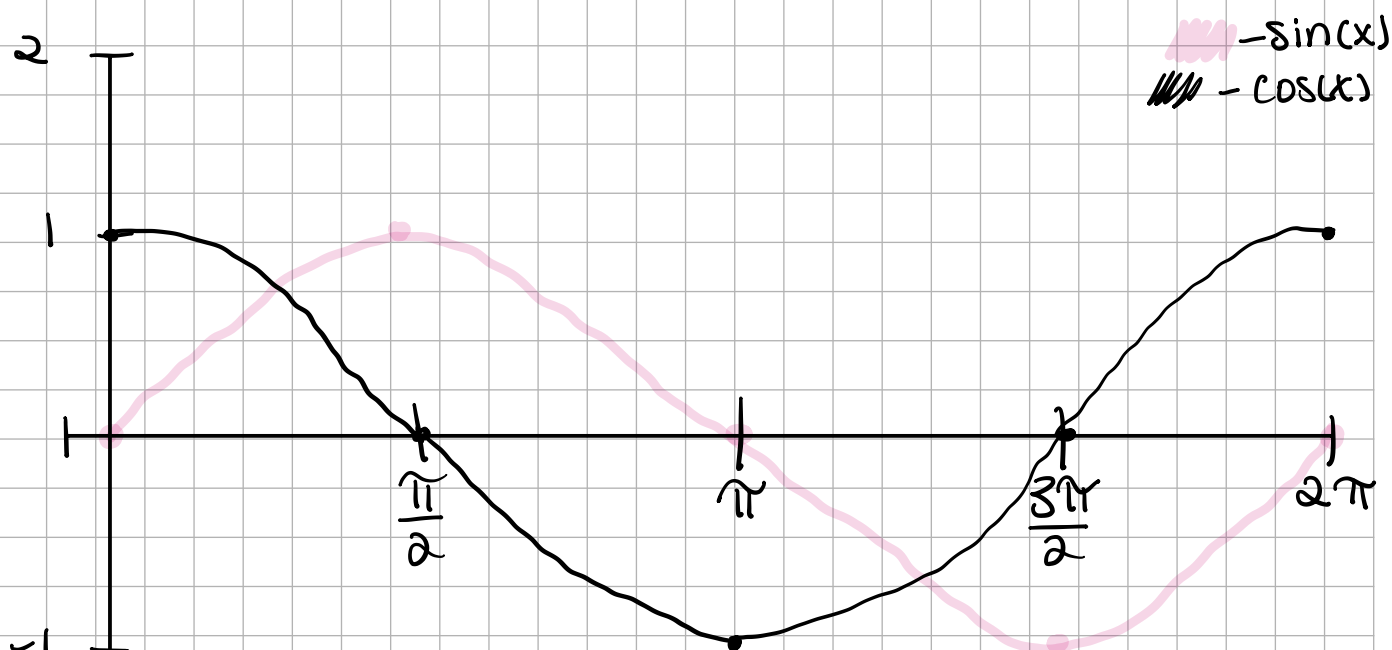
VERY rough
unit circle (one I
draw if I don't have
one)

helpful note: ↷

If you convert between
radians and degrees,
make sure to check your
units!



4) Graph $\sin(x)$ and $\cos(x)$ on the graph below



Important note - make sure you know what plain $\sin$ and $\cos$ graphs look like, and their attributes, ex. Domain & Range. This will help!!

label $\sin(x)$ and $\cos(x)$ or colorcode them

$\sin(x)$ - Domain: $(-\infty, \infty)$ Range: $[-1, 1]$

period = 2π

$\sin$ is odd / k is an integer

x-int at $x = k\pi$

y-int at $y = 0$

helpful
stuff
to know

$\cos(x)$ - Domain: $(-\infty, \infty)$ Range: $[-1, 1]$

period = 2π

$\cos$ is even - k is an integer

x-int at $x = k\pi/2$

y-int at $y = 1$

