Angle Measure (θ)		$\cos\theta$	$\sin\theta$
radians	degrees		
0	$0°$	1	0
$\frac{\pi}{6}$	$30°$	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$
$\frac{\pi}{4}$	$45°$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$
$\frac{\pi}{3}$	$60°$	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$
$\frac{\pi}{2}$	$90°$	0	1
$\frac{2\pi}{3}$	$120°$	$-\frac{1}{2}$	$\frac{\sqrt{3}}{2}$
$\frac{3\pi}{4}$	$135°$	$-\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$
$\frac{5\pi}{6}$	$150°$	$-\frac{\sqrt{3}}{2}$	$\frac{1}{2}$

Angle Measure (θ)		$\cos\theta$	$\sin\theta$
radians	degrees		
$\frac{7\pi}{6}$	$210°$	$-\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$
$\frac{5\pi}{4}$	$225°$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$
$\frac{4\pi}{3}$	$240°$	$-\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$
$\frac{3\pi}{2}$	$270°$	0	-1
$\frac{5\pi}{3}$	$300°$	$\frac{1}{2}$	$-\frac{\sqrt{3}}{2}$
$\frac{7\pi}{4}$	$315°$	$\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$
$\frac{11\pi}{6}$	$330°$	$\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$
2π	$360°$	1	0

NOTES

3. **Identify each of the characteristics for $y = \sin x$ and $y = \cos x$.**

	$y = \sin x$	$y = \cos x$
y-intercept(s)	(0,0)	(0,1)
Domain	$(-\infty, \infty)$	$(-\infty, \infty)$
Range	$[-1, 1]$	$[-1, 1]$
Period	2π	2π
Minimum Output Value	-1	-1
Maximum Output Value	1	1
Amplitude	1	1
Midline	$y=0$	$y=0$

May not know these yet

4. **Describe the intervals of increase and decrease for both the sine and cosine functions. Explain your reasoning.**

5. **Identify the *x*-intercepts for each function.**

   a. ***x*-intercepts for $y = \sin x$**

   b. ***x*-intercepts for $y = \cos x$**

6. **Use the language of transformations to explain how the sine and cosine functions are related.**

Ask yourself:

How can you write this relationship mathematically?

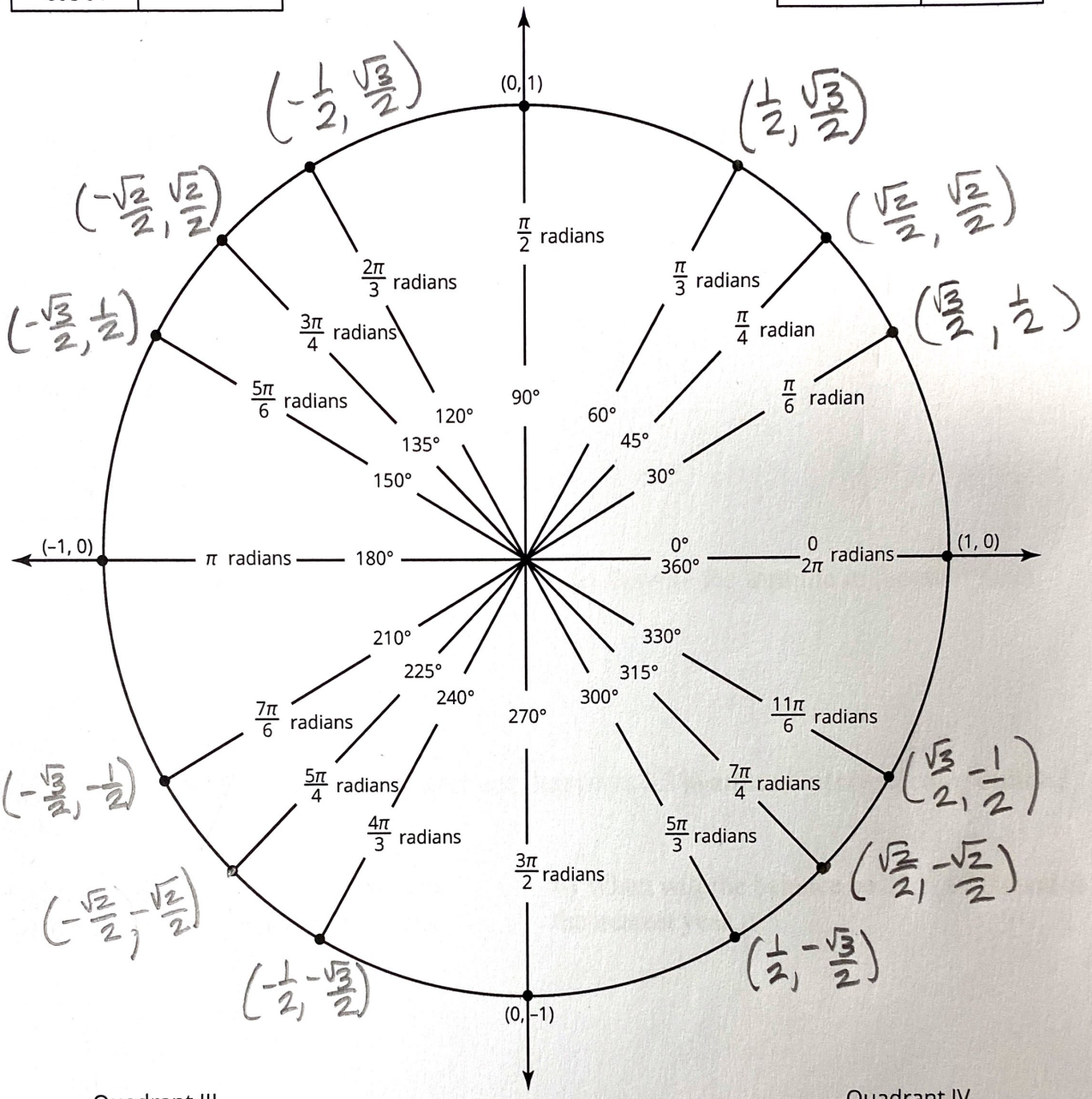
Sine and Cosine on the Unit Circle

Quadrant II

sin θ	+
cos θ	−

Quadrant I

sin θ	+
cos θ	+



Quadrant III

sin θ	−
cos θ	−

Quadrant IV

sin θ	−
cos θ	+