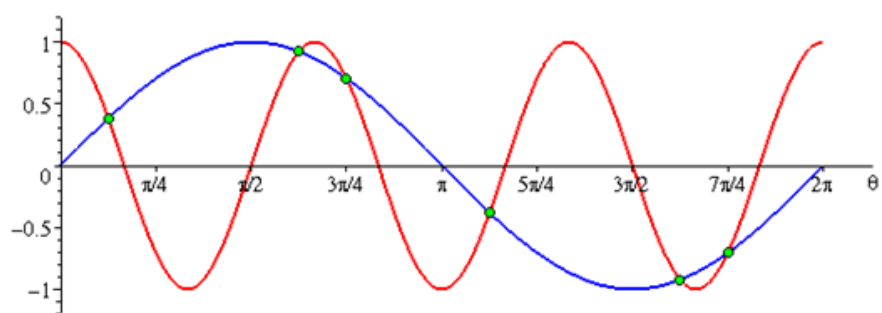


Chapter 8

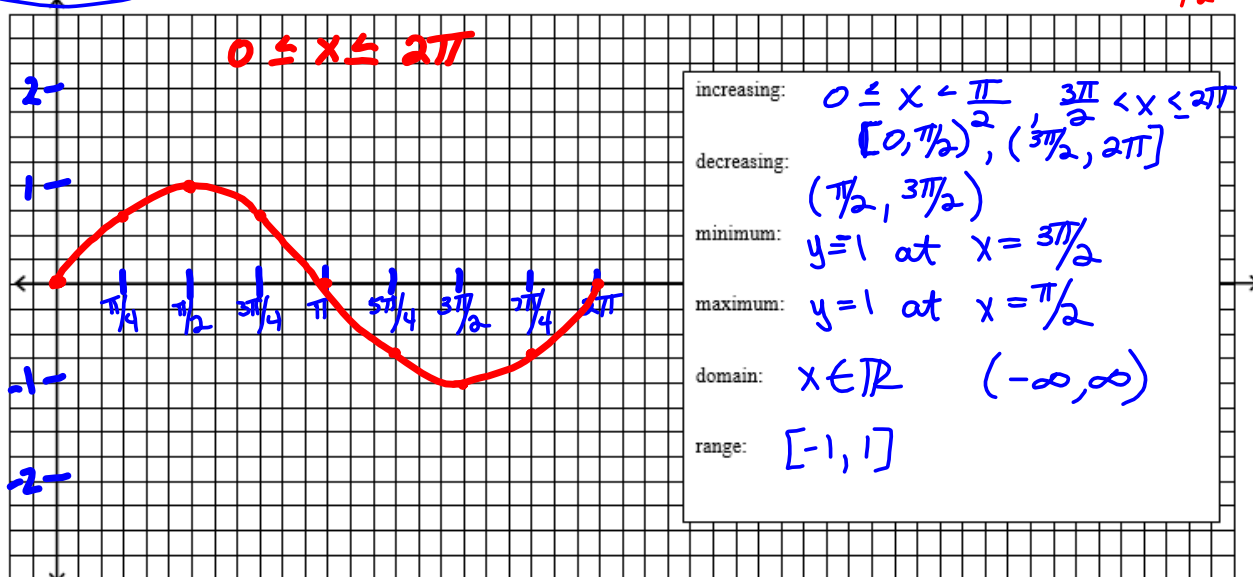
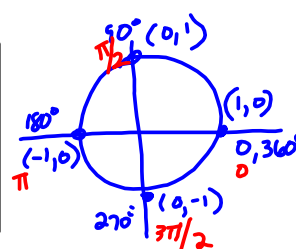
Modeling Trigonometric Situations (Trig Graphing)



Day 1: Basic Sine, Cosine & Tangent Graphs

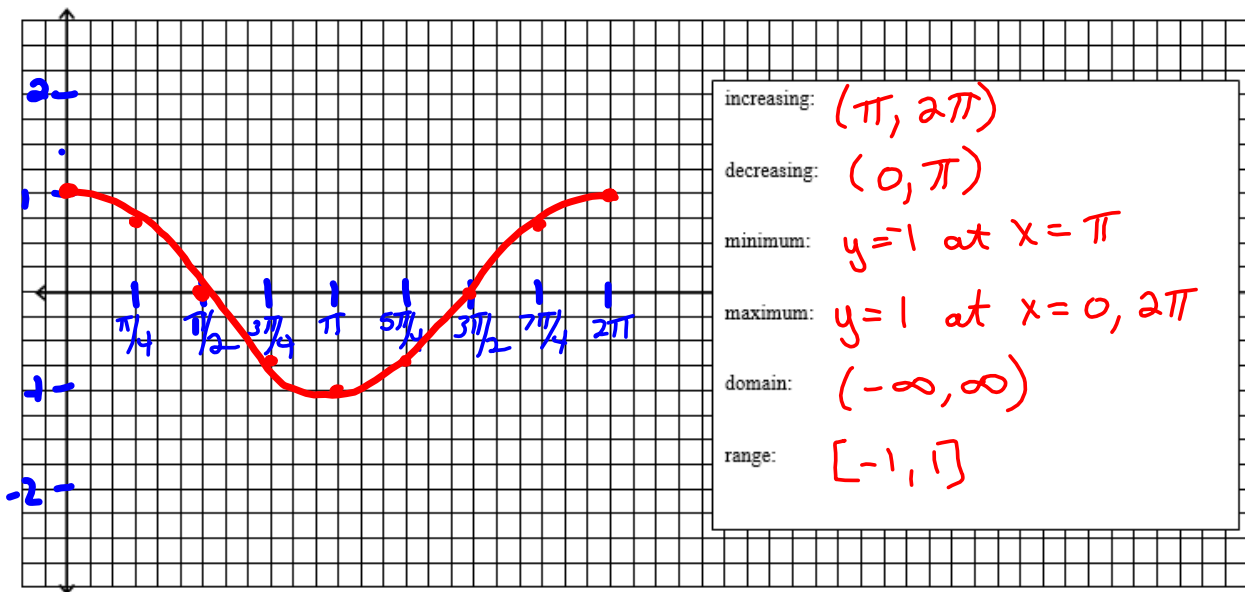
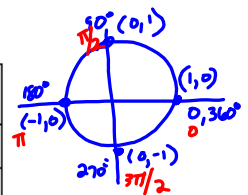
$f(x) = \sin(x)$

		$Q I$		$Q II$		$Q III$		$Q IV$	
Radians (x)	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
Degrees (x)	0	45°	90°	135°	180°	225°	270°	315°	360°
Exact Value (y)	0	$\frac{\sqrt{2}}{2}$	1	$\frac{\sqrt{2}}{2}$	0	$-\frac{\sqrt{2}}{2}$	-1	$-\frac{\sqrt{2}}{2}$	0
Decimal (y)	0	.7	1	.7	0	-.7	-1	-.7	0



$f(x) = \cos(x)$

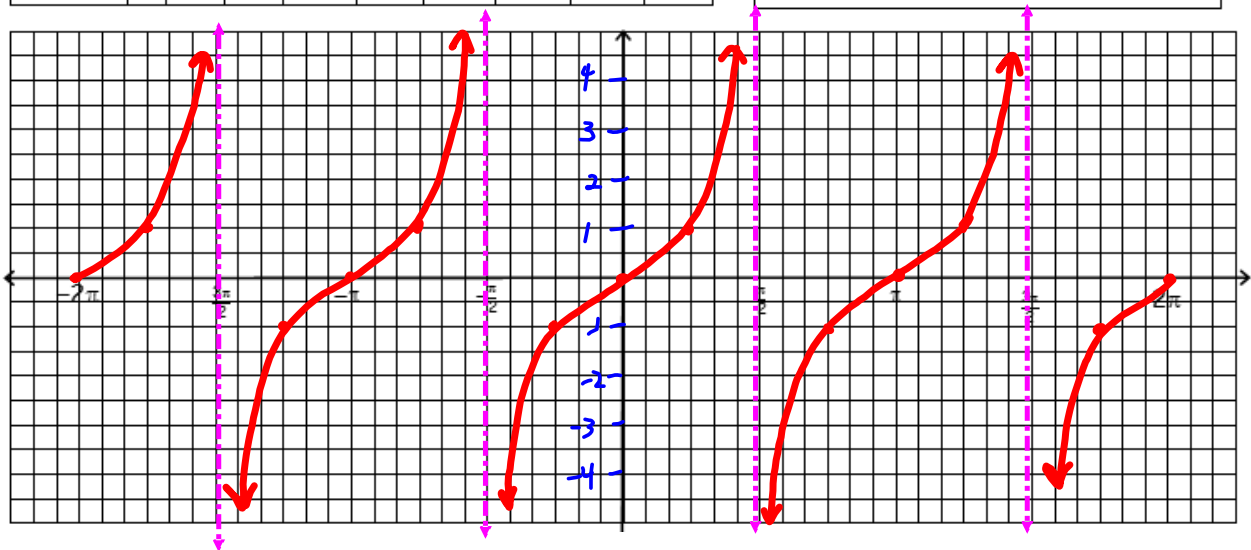
		$+$ QI		$-$ QII		$-$ QIII		$+$ QIV	
Radians	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
Degrees	0°	45°	90°	135°	180°	225°	270°	315°	360°
Exact Value	1	$\frac{\sqrt{2}}{2}$	0	$-\frac{\sqrt{2}}{2}$	-1	$-\frac{\sqrt{2}}{2}$	0	$\frac{\sqrt{2}}{2}$	1
Decimal	1	.7	0	-.7	-1	-.7	0	.7	1



$f(x) = \tan(x)$									
		QI	QII		$QIII$	QIV			
Radians	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
Degrees	0°	45°	90°	135°	180°	225°	270°	315°	360°
Exact Value	0	1	undef	-1	0	1	undef	-1	0
Decimal									

Radians	0	$-\frac{\pi}{4}$	$-\frac{\pi}{2}$	$-\frac{3\pi}{4}$	$-\pi$	$-\frac{5\pi}{4}$	$-\frac{3\pi}{2}$	$-\frac{7\pi}{4}$	-2π
Degrees	0°	-45°	-90°	-135°	-180°	-225°	-270°	-315°	-360°
Exact Value	0	-1	undef	1	0	-1	undef	1	0
Decimal									

increasing: always, except odd $\frac{\pi}{2}$'s
 decreasing: Never
 minimum: None
 maximum: None
 domain: $\{x | x \in \mathbb{R}, \text{except odd } \pi/2\text{'s}\}$
 range: $\{y | y \in \mathbb{R}\}$



Ch. 7 Test Tomorrow

HWK 8-1 due
Thurs