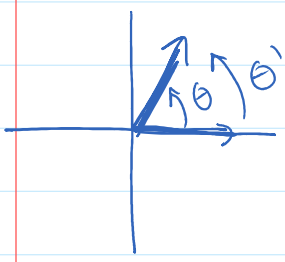
Friday, October 12, 2018 10:24 AM

C.3 Notes (4.3 in bk): Ref Ls & the Unit Circle

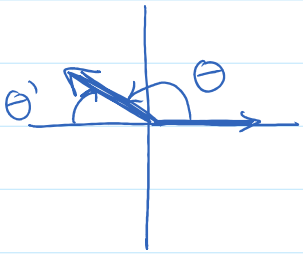
Reference Angle: an acute angle formed by the terminal side of θ and the closest x-axis.

Q1:



$\theta' = \theta$

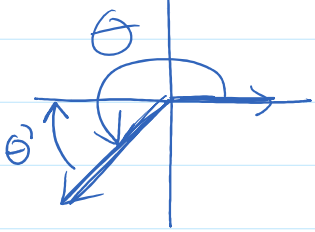
Q2:



$\theta' = 180° - \theta$

$\theta' = \pi - \theta$

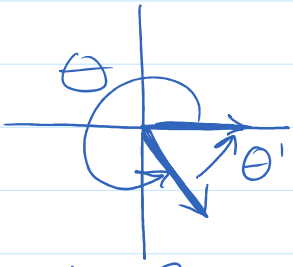
Q3:



$\theta' = \theta - 180°$

$\theta' = \theta - \pi$

Q4:



$\theta' = 360° - \theta$

$\theta' = 2\pi - \theta$

#1: Find the reference angle

a) 300°

Q4

$360 - 300$

$60°$

b) $-\frac{2\pi}{3}$

Q3

$-120 + 360 = 240°$

$240 - 180 = 60$

$\frac{\pi}{3}$

c) $\frac{\pi}{12}$

$\frac{\pi}{12}$

d) 170°

Q2

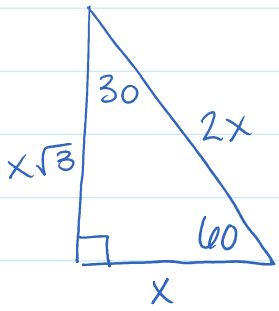
$180 - 170$

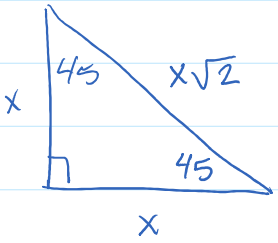
$10°$

Review of Special Right $\triangle$s

30-60-90

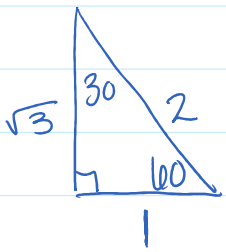
45-45-90

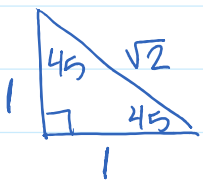




The Unit Circle: a circle ($x^2+y^2=r^2$) graphed on the x, y plane w/ a radius of 1 ($x^2+y^2=1$) and uses properties of special right Δs

#2: Fill in the table





	30°	60°	45°
sin	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}\cdot\frac{\sqrt{2}}{\sqrt{2}}=\frac{\sqrt{2}}{2}$
cos	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}\cdot\frac{\sqrt{2}}{\sqrt{2}}=\frac{\sqrt{2}}{2}$
tan	$\frac{1}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}=\frac{\sqrt{3}}{3}$	$\sqrt{3}$	1

$\sin\theta=\frac{y}{r}$ $\cos\theta=\frac{x}{r}$ $\tan\theta=\frac{y}{x}$