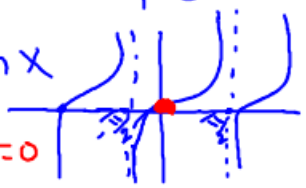
Bellwork Friday 02/02

Graph one cycle of all 6 trig functions

1) $y = \sin x$

2) $y = \cos x$

3) $y = \tan x$



0° (1,0)

$\frac{\pi}{2}$ (0,1)

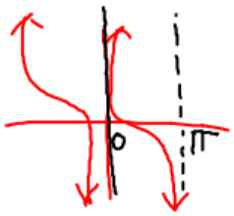
$\tan 0 = \frac{\sin}{\cos} = \frac{0}{1} = 0$

$\tan \frac{\pi}{2} = \frac{1}{0}$ und

$y = \sec x$

$y = \csc x$

$y = \cot x$



$\sec = \frac{1}{\cos} = \frac{1}{1}$

$\csc = \frac{1}{\sin} = \frac{1}{0}$ und.

cot does not pass 0

tan passes through 0

$\cos 0^\circ = 1$

$\sin 0^\circ = 0$

Section 4.5 Day 2

Ex 1:

Given that $\sin x = 1/2$ → y coord.
and $0 < x < \pi/2$

Find x (Find the actual angle)

- Draw a unit circle and shade the given interval
- Mark all the angles in the given interval and write their coordinates.

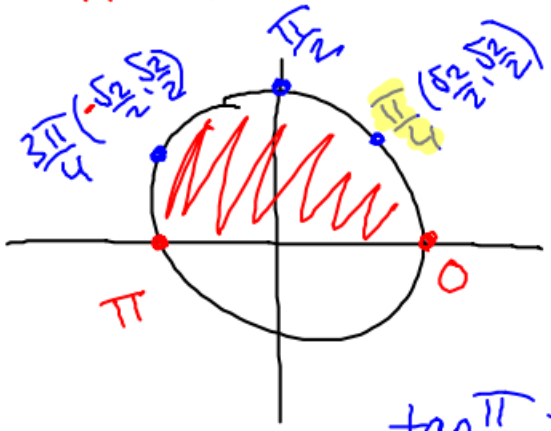
$x = \frac{\pi}{6}$

(30°)

Ex2: Given that $\tan x = 1$

and $0 \leq x \leq \pi$

Find x

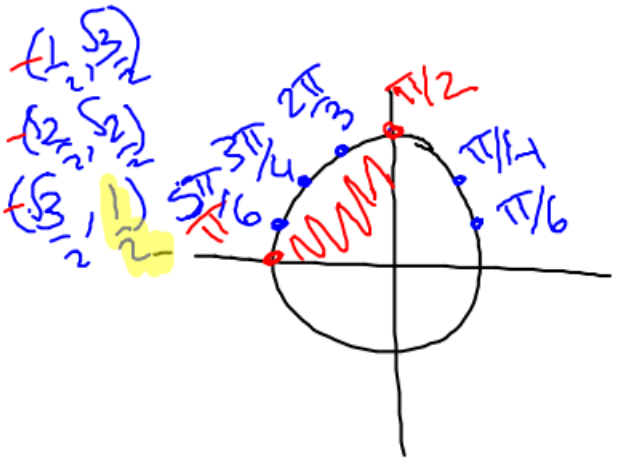


$\tan = \frac{\sin}{\cos} = 1$

$\tan\frac{\pi}{4} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$

$x = \frac{\pi}{4}$

Ex3: Given that $\csc x = 2$ and $\frac{\pi}{2} \leq x \leq \pi$ Find x.



$x = \frac{5\pi}{6}$

$\csc = \frac{1}{\sin}$ $\sin x = \frac{1}{2}$

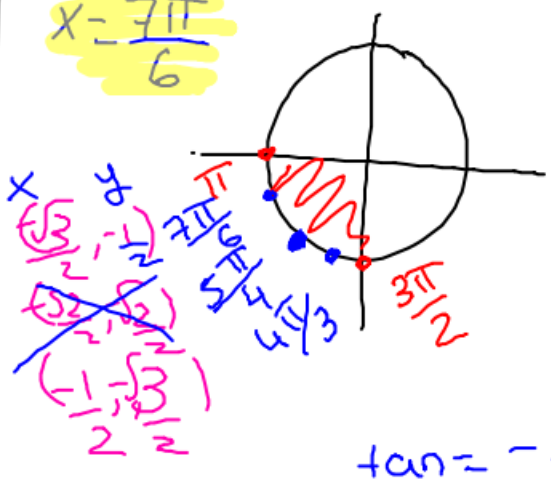
Ex 4:

if $\cot x = \sqrt{3}$

and $\pi \leq x \leq \frac{3\pi}{2}$

find x

$x = \frac{7\pi}{6}$



$\cot x = \frac{1}{\tan}$

$\tan = \frac{1}{\sqrt{3}}$

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

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

KCF

$= +\frac{1}{\sqrt{3}}$

Hw p 366 # 29-34