-Quiz 7.1/7.2 Graphs of Sine and Cosine
-Calendar Math Pg.13-15 Finish
-Questions on 7.2 Homework
-Turn in 7.2 Homework
-7.3 Graphs of Tangent, Symmetry, and Periodicity
-Questions on ACT #6 and turn in

Feb 5-5:50 PM

$\left(6\theta + \frac{5\pi}{6}\right)$ left $\frac{5\pi}{6}$

$6\theta + \frac{5\pi}{6} = 0$

$-\frac{5\pi}{6} \quad -\frac{5\pi}{6}$

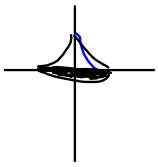
$\frac{1}{6} \cdot 6\theta = -\frac{5\pi}{6} \cdot \frac{1}{6}$

$\theta = -\frac{5\pi}{36}$

$\frac{2\pi}{6}$ $\frac{\pi}{3}$

Feb 7-9:47 AM

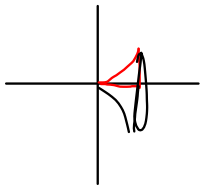
Finish Calendar Math
Pg. 13



Clown tent
Solid bottom

Rotate around the y-axis

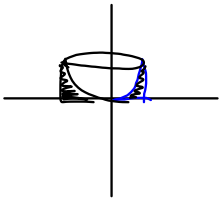
Jan 19-6:45 AM



Sideways
clown tent
w/ solid bottom

Rotate around the x-axis

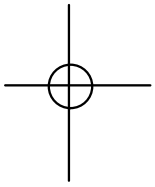
Feb 5-5:55 PM



empty bowl
w/o lid

Rotate around the y-axis

Feb 5-5:55 PM



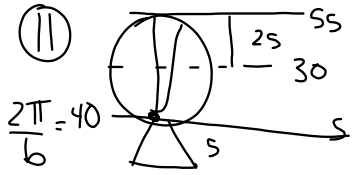
Sphere

Rotate around the y-axis

Feb 6-3:40 PM

7.2 Phase shift homework questions...

(11)




$\frac{2\pi}{b} = 40$

$\frac{2\pi}{b} = 6$

$\frac{\pi}{20} = b$

$a = 25$

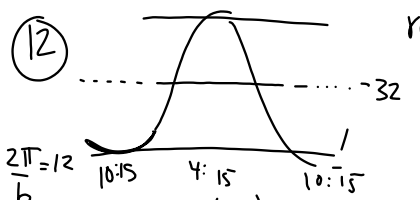
$b = \frac{\pi}{20}$

$K = 30$

reflect

Feb 5-5:56 PM

(12)




reflected

$a = 32$

$\frac{2\pi}{b} = 12$

$b = \frac{2\pi}{12}$ $\frac{\pi}{6}$

$K = 32$

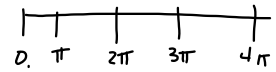
$-32\cos\left(\frac{\pi}{6}x\right)+32$

$+0$

Feb 7-9:59 AM

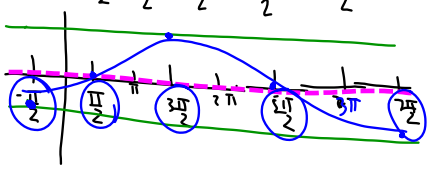
(4) $a: 1$

$P: \frac{2\pi}{1}$ $4\pi$




PS: left $\frac{\pi}{2}$

VS: 0



Feb 7-10:05 AM

Feb 7-10:11 AM

(7) $a = 1$

period: $\frac{2\pi}{3}$

PS: right $\frac{\pi}{2}$

VS: 4

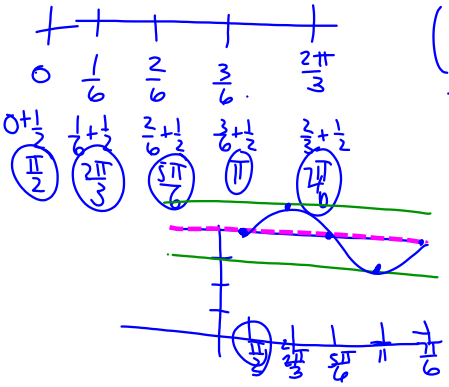
$3x - \frac{3\pi}{2} = 0$

$+\frac{3\pi}{2}$ $\frac{3\pi}{2}$

$\frac{1}{3} \cdot 3x = \frac{3\pi}{2} \cdot \frac{1}{3}$

$x = \frac{\pi}{2}$

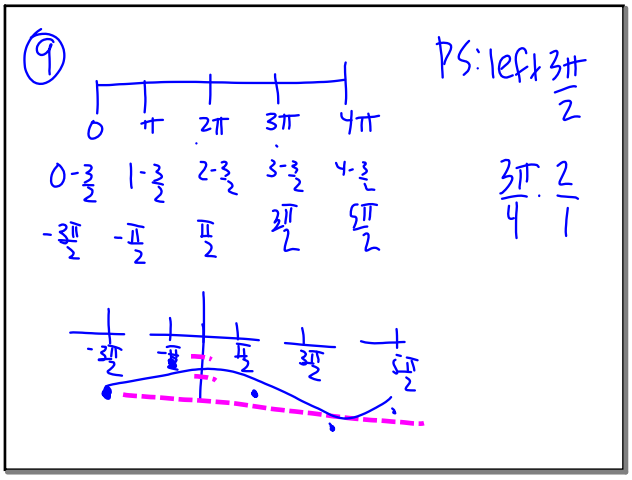
Feb 7-10:11 AM




$\left(\frac{2}{3}\right)$ $\frac{\pi}{6}$

4

Feb 7-10:15 AM

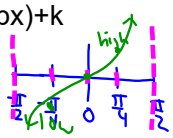



Feb 7-10:27 AM

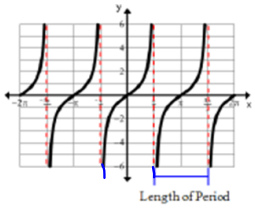
7.3 Tangent Graphs, symmetry, periodicity

f(x)=atan(bx)+k

Period: $\frac{\pi}{b}$




Asymptotes: $\pm\frac{\pi}{2b}$



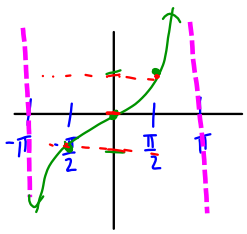

Jan 19-6:47 AM

$f(x)=\tan\left(\frac{1}{2}x\right)+0$

period: $\frac{\pi}{\frac{1}{2}}$ $\pi\cdot 2$ $2\pi$

Vertical asymptotes: $\frac{\pi}{2}$ $\pm\pi$

y-int: (0,0)



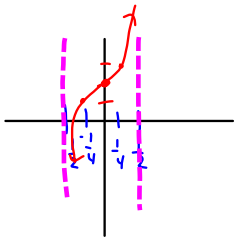

Jan 19-6:46 AM

$f(x)=\tan(\pi x)+2$

period: $\frac{\pi}{\pi}$ 1

Vertical asymptotes: $\frac{\pi}{2\pi}$ $\pm\frac{1}{2}$

y-int: (0,2)



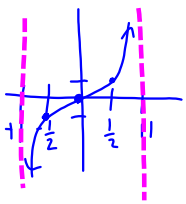

Jan 19-6:46 AM

9) $f(x)=\frac{1}{2}\tan\left(\frac{\pi}{2}x\right)$

period: $\frac{\pi}{\frac{\pi}{2}}$ $\frac{2}{\pi}$ 2

V. asymp $\frac{\pi}{2\pi}$ $\frac{\pi}{\pi}$ $\pm 1$

y-int: (0,0)




Feb 9-9:45 AM

reflection

-2

Feb 9-9:49 AM

## Odd and Even Symmetry

$\cos(-\theta)=\cos(\theta)$

$\cos\left(-\frac{\pi}{3}\right)$

$\cos -\frac{\pi}{3}=\cos\frac{\pi}{3}$

$\frac{1}{2}$

$\sin(-\theta)=-\sin(\theta)$

$\sin\left(-\frac{\pi}{3}\right)$

$\sin -\frac{\pi}{3}=-\left(\sin\frac{\pi}{3}\right)$

$-\frac{\sqrt{3}}{2}$

Jan 19-6:53 AM

$\sin -\frac{\pi}{3}$

$-\frac{\sqrt{3}}{2}$

$\frac{5\pi}{3}$

Feb 9-9:58 AM

(II) $\theta=-\frac{\pi}{6}$

$\cos\theta=\frac{\sqrt{3}}{2}$

$\sin\theta=-\frac{1}{2}$

$\cos -\frac{\pi}{6}=\cos\frac{\pi}{6}$

$\sin -\frac{\pi}{6}=-\sin\frac{\pi}{6}$

Feb 9-9:59 AM

$\theta=-\frac{\pi}{6}$

$\frac{11\pi}{6}$

$\cos\theta=\frac{\sqrt{3}}{2}$

$\sin\theta=-\frac{1}{2}$

Feb 9-10:00 AM

$\cos -\frac{2\pi}{3}=\cos\frac{2\pi}{3}$

$-\frac{1}{2}$

$2\pi/3$

$-2\pi/3$

120

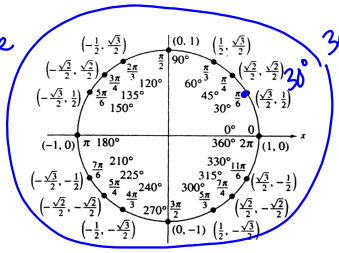
Feb 9-9:55 AM

## Periodicity:Around the circle more than once

390° has the same values as 30° Same spot

30+360

390



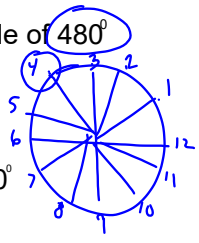

Jan 19-6:55 AM

There are 12 $30^0$ angles around the unit circle

To identify the reference angle of $480^0$

$\frac{480}{30} = 16$ 16-12=4

$480^0$ is the same as $30x4=120^0$

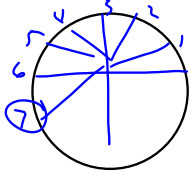


Feb 5-6:02 PM

This works for radians as well.

$\cos\left(\frac{31\pi}{6}\right)$ $\frac{7\pi}{6}$ $-\frac{\sqrt{3}}{2}$

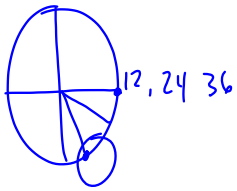
2 times around the circle would be 24, 31-24=7



Feb 5-6:07 PM

Sin $\frac{17\pi}{3} \cdot 2$ $\frac{34\pi}{6}$

$-\frac{\sqrt{3}}{2}$



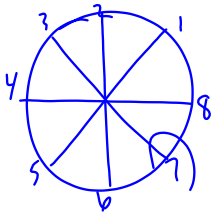

Feb 9-10:07 AM

There are 8 $45^0$ angles in the unit circle

sin $\frac{31}{4}\pi$

$-\frac{\sqrt{2}}{2}$

$\frac{x8}{32}$



Feb 5-6:08 PM

$\sin(9\pi)$

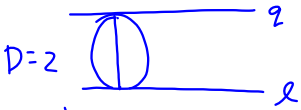
0

5 3 1 0 2 4 6

Feb 5-6:08 PM

ACT #6 Questions

Shortest Distance = D




$\pi(1)^2$

$\pi$

$D = 3D - 4$

$-3D \quad -3D$

$\frac{-2D}{-2} = \frac{-4}{-2}$

$D = 2$

Feb 5-6:28 PM

(10) 14 14 8 8

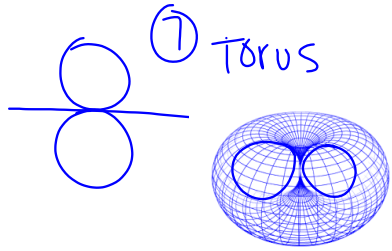
Feb 7-10:53 AM

(5) (3,4) 4 7

$\frac{1}{2} \cdot 7 \cdot 4$

Feb 7-10:53 AM

(7) Torus



Feb 9-10:13 AM

(9) 40

$\frac{60}{360}$ $\frac{1}{6}$

Feb 9-10:18 AM

(11) $\frac{1}{40} = \frac{x}{360}$ $40x = 360$

$\frac{40x}{40} = \frac{360}{40}$

$x = 9$

Feb 9-10:21 AM

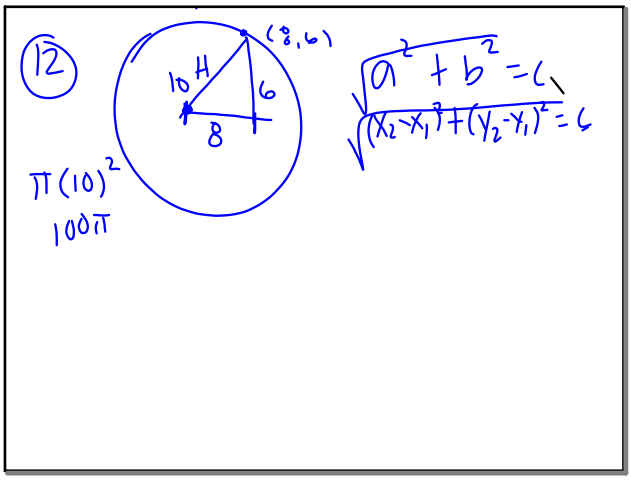
(3) F D G 45 45 $x\sqrt{2}$ 4 $\frac{4}{\sqrt{2}}$ x $\frac{4}{\sqrt{2}}$

$\frac{4}{\sqrt{2}} = \frac{x\sqrt{2}}{\sqrt{2}}$

$x = \frac{4}{\sqrt{2}}$

$\frac{4}{\sqrt{2}} \cdot \frac{4}{\sqrt{2}} = \frac{16}{2} = 8$

Feb 9-10:22 AM




Feb 9-10:25 AM