

Plan for Today:

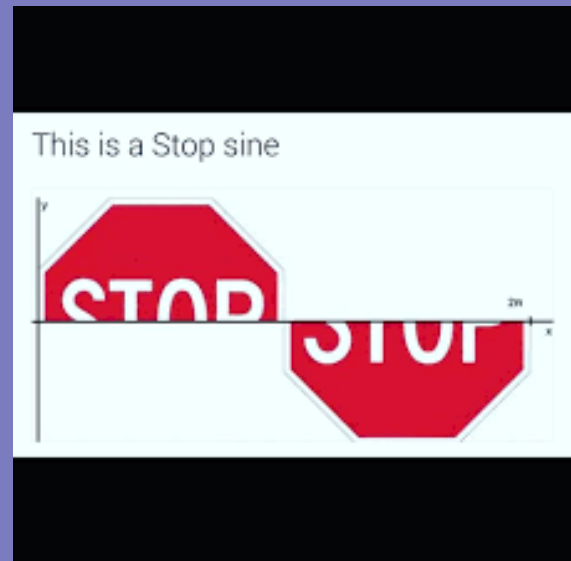
Unit Circle Quiz

Check Homework

Graphing Tangent Curves

HW: WS Graphing Trig Functions

page 849 #34, 35, 36, 40, 41, 42



HAT

4/24/18

Tangent Curves with Transformations

$$\frac{\sin(\text{gerine})}{\cos(\text{gerine})} = \text{orange}$$

Warm Up #1:

Find the exact value of each trig ratio. No peeking at the Unit Circle!

$\left(\frac{\sqrt{3}}{2}, \frac{\sqrt{3}}{2}\right)$
 $\tan \frac{3\pi}{4}$
 $\textcircled{-1}$

$\tan \frac{11\pi}{6}$
 $\left(\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$
 $\textcircled{-\frac{1}{\sqrt{3}}}$

$\tan \frac{\pi}{3}$
 $\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$
 $\frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \textcircled{\sqrt{3}}$

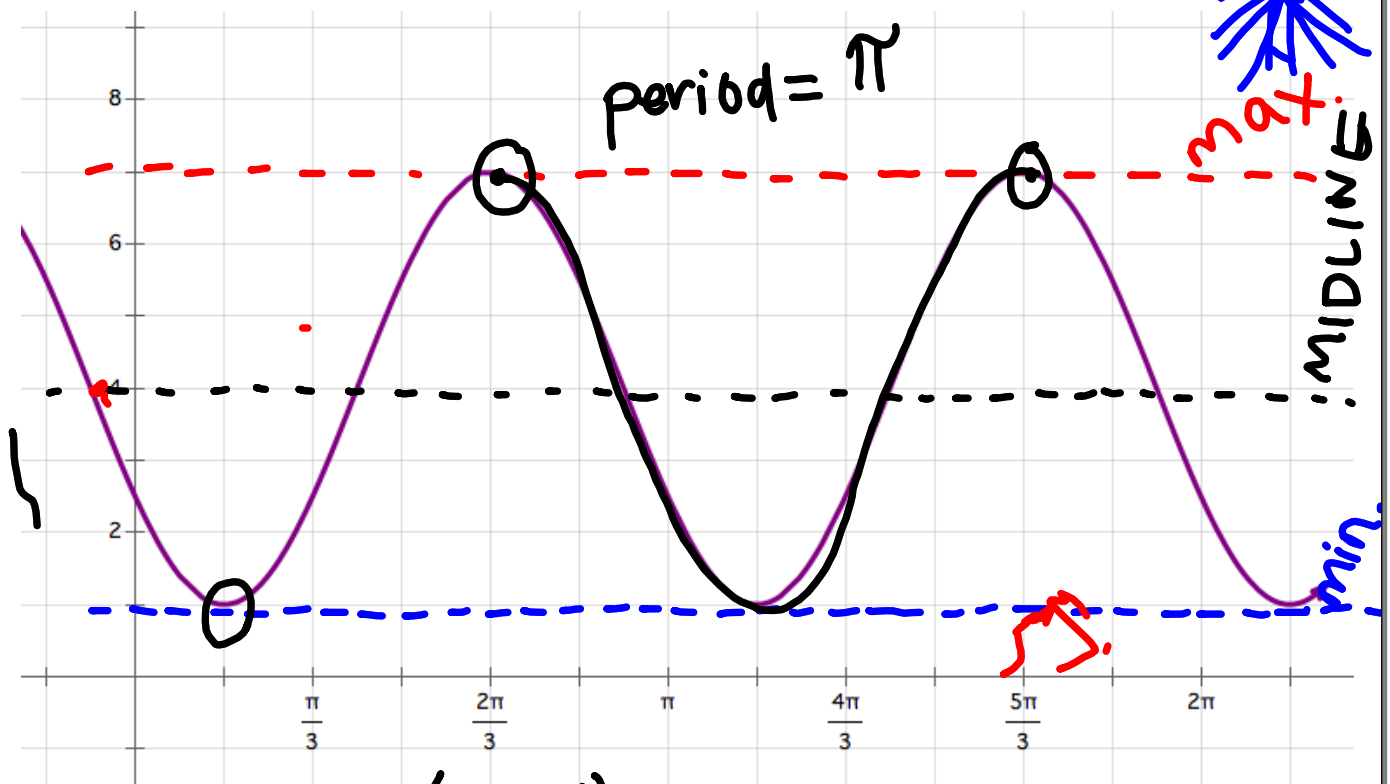
$\tan \pi$
 $(-1, 0)$
 $\textcircled{0}$

$\tan \frac{5\pi}{4}$
 $\textcircled{1}$

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

Warm Up #2:

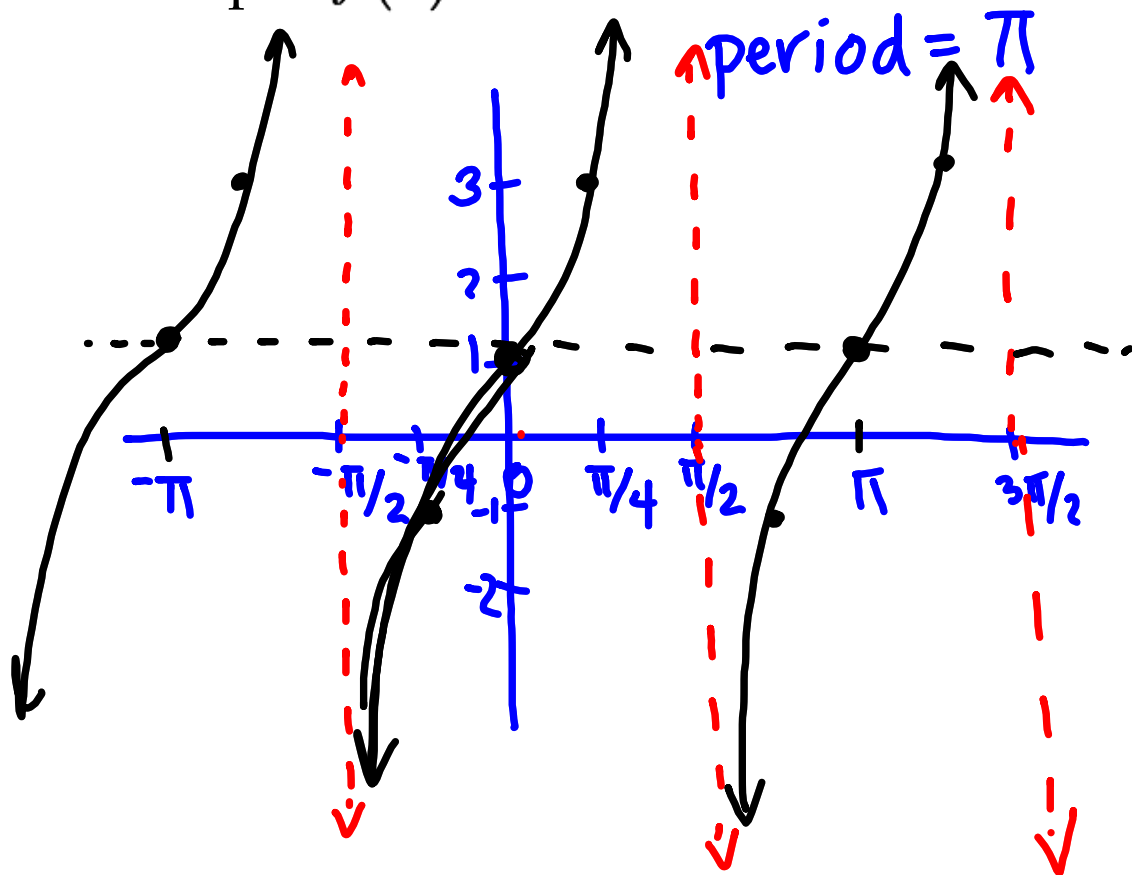
Write two equations (one sine and one cosine) for the graph.



$$y = -3\cos 2\left(\theta - \frac{\pi}{6}\right) + 4$$

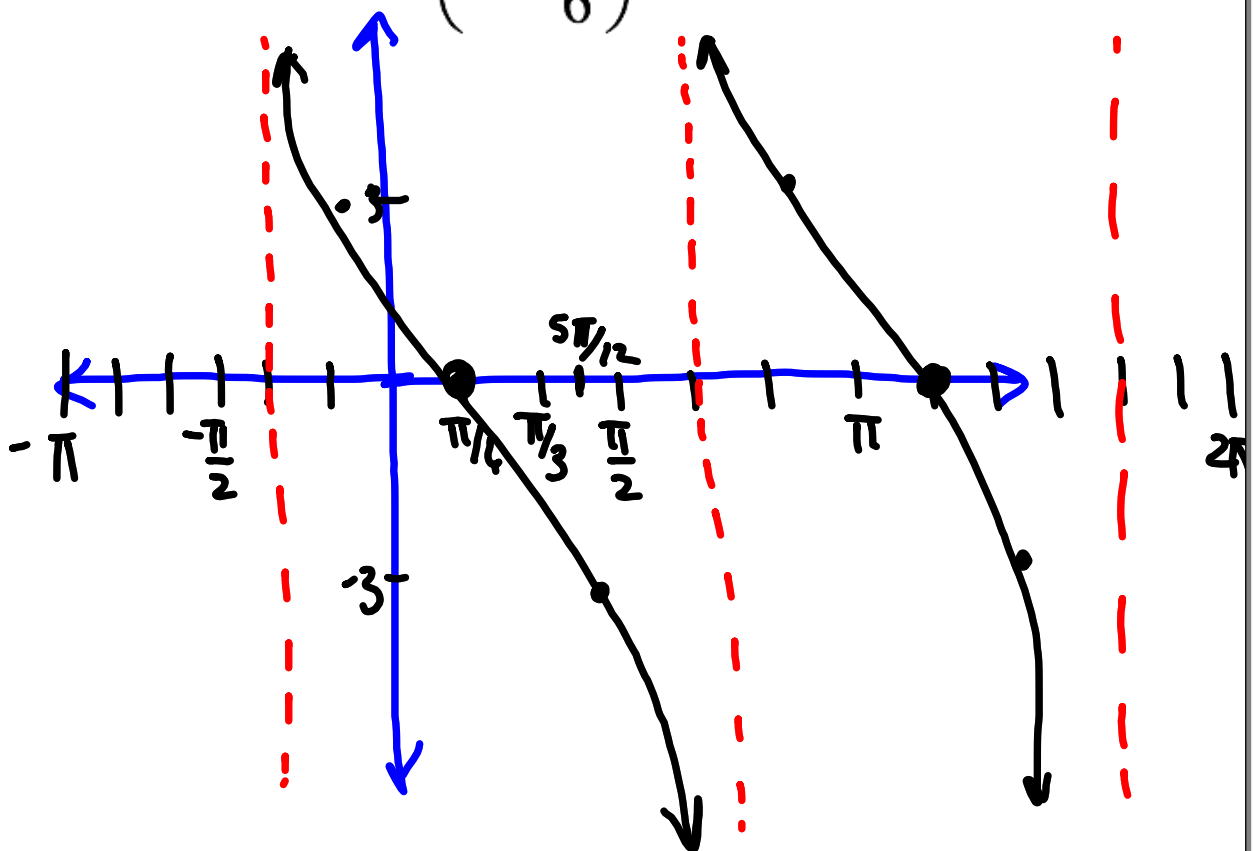
$$y = -3\sin 2\left(\theta + \frac{\pi}{12}\right) + 4$$

EX #1: Graph $f(x) = 2 \tan x + 1$



EX #2: $f(\theta) = -3 \tan\left(\theta - \frac{\pi}{6}\right)$

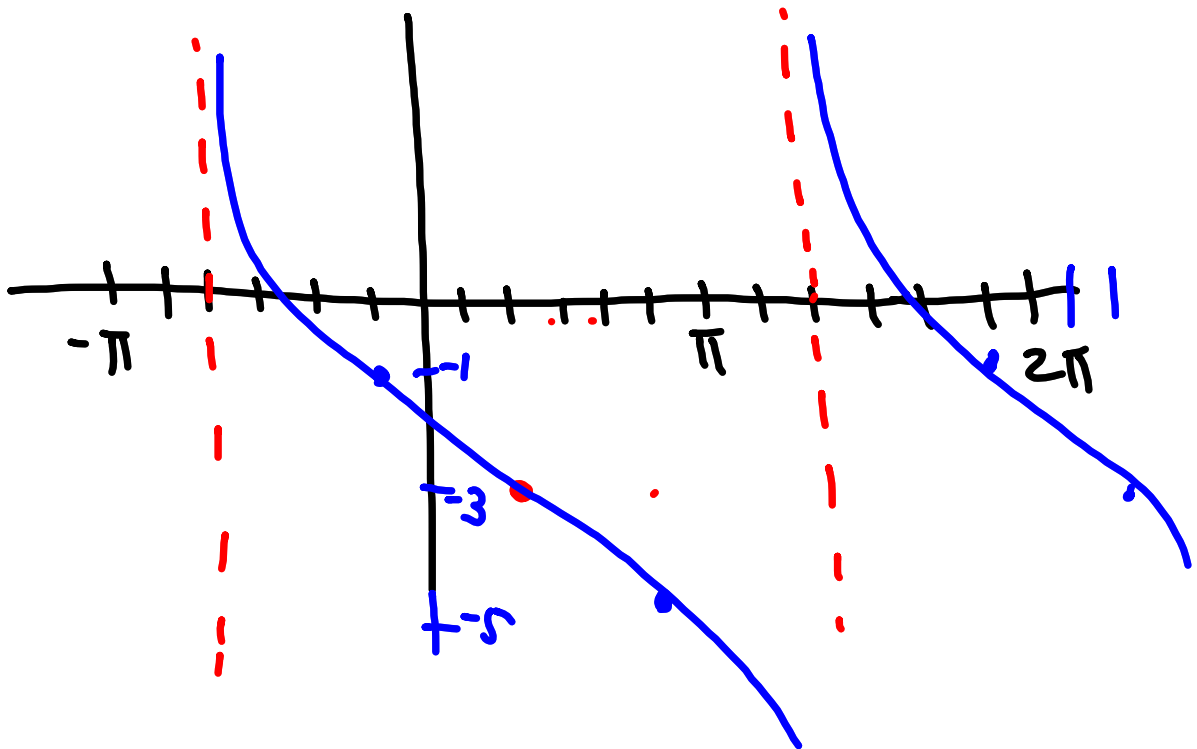
Period = π



EX #3: $f(x) = -2 \tan\left(\frac{1}{2}x - \frac{\pi}{6}\right) - 3$

Period: $\frac{\pi}{1/2} = 2\pi$

$f(x) = -2 \tan \frac{1}{2}\left(x - \frac{\pi}{3}\right) - 3$



Ex #4: Write an equation for the graph.

