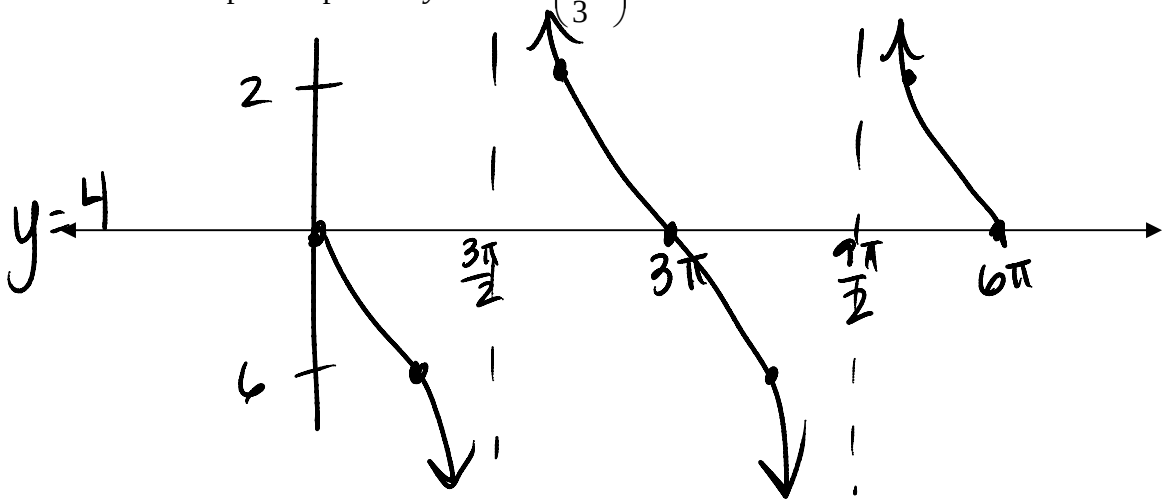
6.5 Day 4 Graphing tanΘ and cotΘ and writing equations HW

1. Graph two periods $y = -2\tan\left(\frac{1}{3}\theta\right) + 4$



Midline: $y = 4$

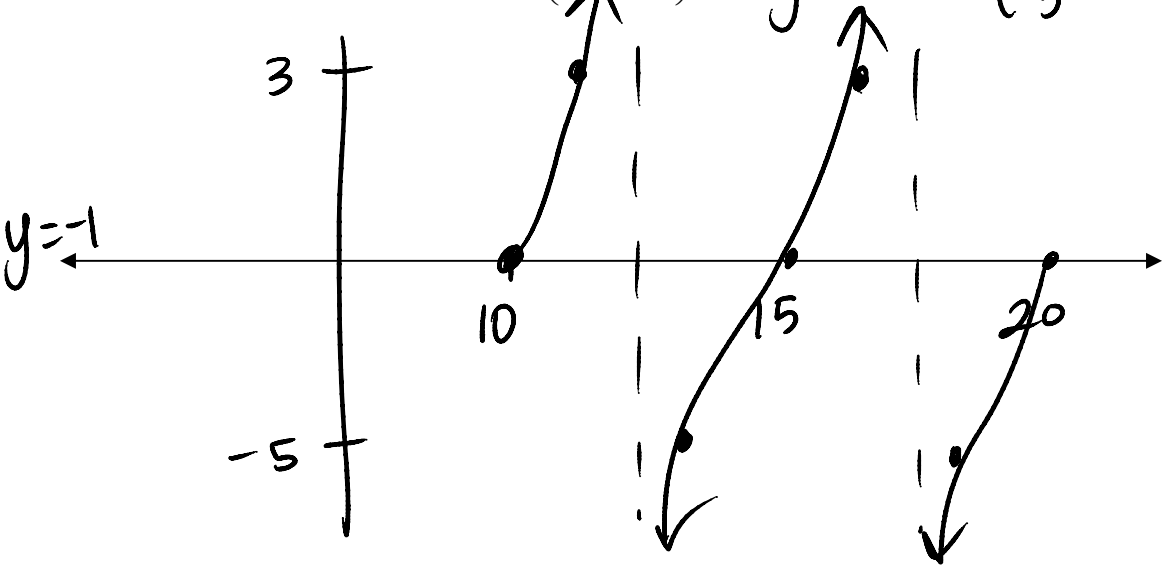
Period: $\pi \cdot 3 = 3\pi$

Phase shift: None

starting critical point: 0

end critical point: 3π

2. Graph two periods $y = 4\tan\left(\frac{\pi}{5}\theta - 2\pi\right) - 1$ $y = 4\tan\left(\frac{\pi}{5}(\theta - 10)\right) - 1$



Midline: $y = -1$

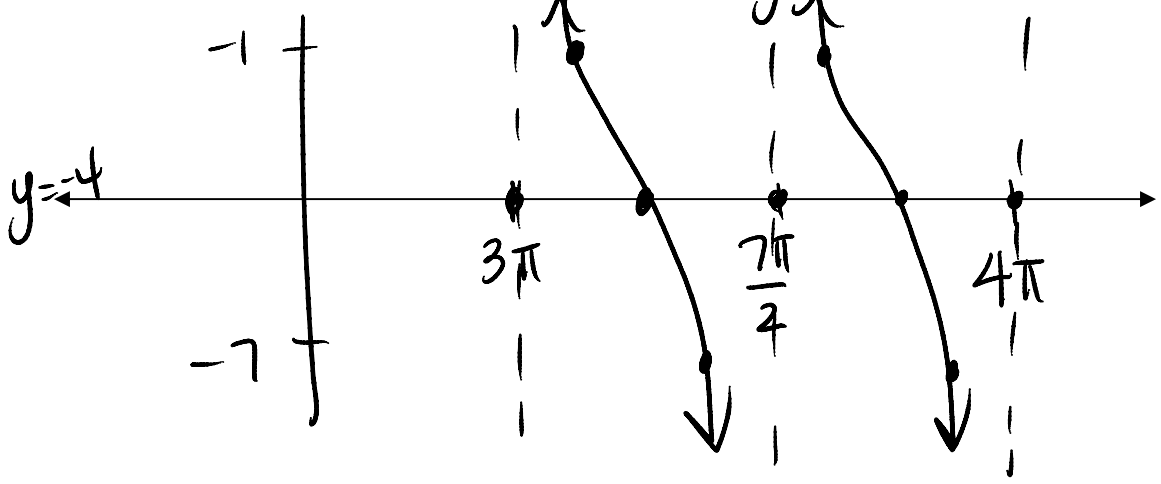
Period: $\pi \cdot \frac{5}{\pi} = 5$

Phase shift: 10

starting critical point: 10

end critical point: 15

3. Graph two periods $y = 3\cot(2\theta - 6\pi) - 4$ $y = 3\cot(2(\theta - 3\pi)) - 4$



Midline: $y = -4$

Period: $\pi/2$

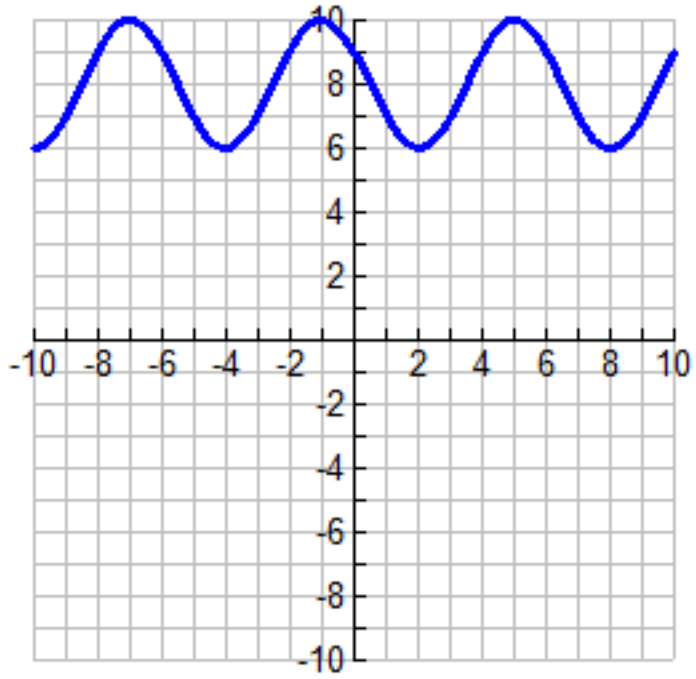
Phase shift: 3π

starting critical point: 3π

end critical point: $\frac{7\pi}{2}$

Writing equations of sinusoids

4. Write four different equations transforming sinΘ and cosΘ.



Amplitude: 2

Sinusoidal axis: $y=8$

Period: 6

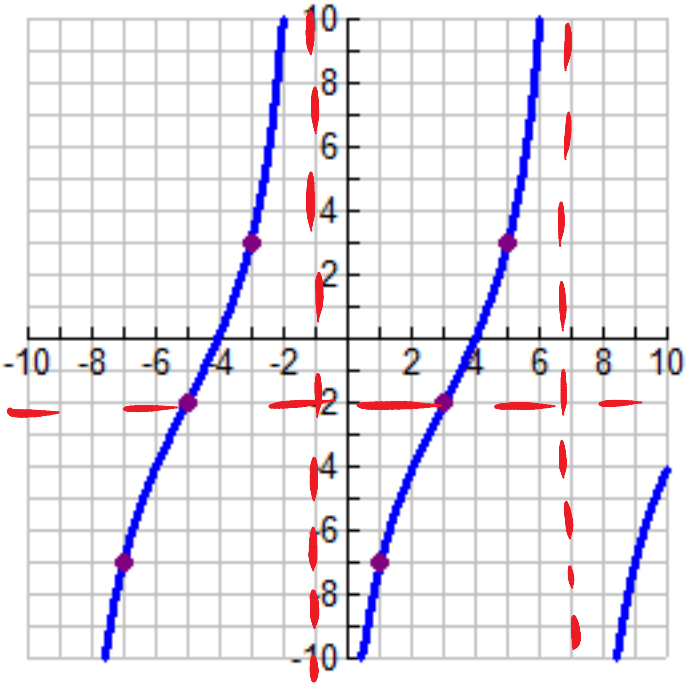
$y = 2\cos\left(\frac{\pi}{3}(x+1)\right)+8$

$y = -2\cos\left(\frac{\pi}{3}(x+4)\right)+8$

$y = 2\sin\left(\frac{\pi}{3}(x-3.5)\right)+8$

$y = -2\sin\left(\frac{\pi}{3}(x-.5)\right)+8$

5. Write four different equations transforming tanΘ and cotΘ.



Midline: $y=-2$

Period: 8

$y = 5\tan\left(\frac{\pi}{8}(x+5)\right)-2$

$y = 5\tan\left(\frac{\pi}{8}(x-3)\right)+-2$

$y = -5\cot\left(\frac{\pi}{8}(x+1)\right)-2$

$y = -5\cot\left(\frac{\pi}{8}(x-7)\right)-2$