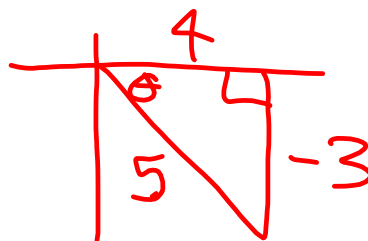## Review:

Given that $\sec\theta = \frac{5}{4}$ and θ is in quadrant IV, evaluate

(4 points each)

15. $\cos\theta = \boxed{4/5}$

16. $\tan\theta = \boxed{-3/4}$

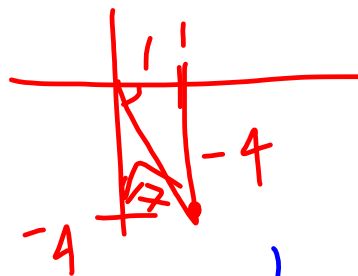**Given that the terminal side of passes through the point $(1, -4)$, evaluate** (4 points each)

17. $\cot\theta = \boxed{-1/4}$

18. $\sin\theta = \boxed{-4/\sqrt{17}}$

Test #2 FRIDAY!

Summary:

For a Trigonometric function of the form $y = af\left[b\left(x + \frac{c}{b}\right)\right] + d,$

Amplitude $= |a|$ (note that amplitude is always positive)

$$\textbf{Period} = \frac{original\ period\ of\ the\ function\ (\pi\ or\ 2\pi)}{|b|}$$

Horizontal shift $= \frac{c}{b}$, $\begin{array}{l} left\ if\ \frac{c}{b} > 0 \\ right\ if\ \frac{c}{b} < 0 \end{array}$

Vertical shift $= d$, $\begin{array}{l} up\ if\ d > 0 \\ down\ if\ d < 0 \end{array}$

1

$y = 3\cot\frac{\pi}{5}x + \frac{3}{2}$

amplitude:

3

period: 5

$\frac{\pi}{\pi/5} = \frac{\pi}{1}\cdot\frac{5}{\pi}$

horiz. shift:

vert. shift:

up 3/2

$y = \frac{1}{2}\tan\left(\frac{\pi}{2}x + \pi\right) - 1$
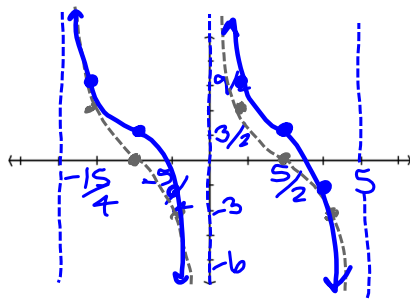
amplitude:

$\frac{1}{2}$

period:

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

horiz. shift: left

$\frac{\pi}{\pi/2} = 2$ (2 ticks)

vert. shift: 2 ticks

down!

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

amplitude:

4

period:

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

horiz. shift: right
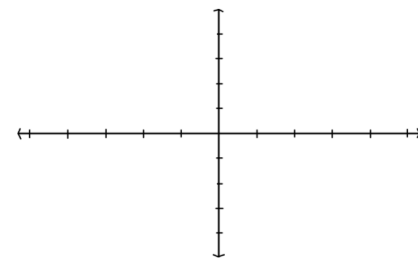
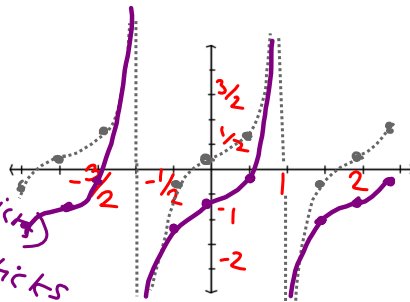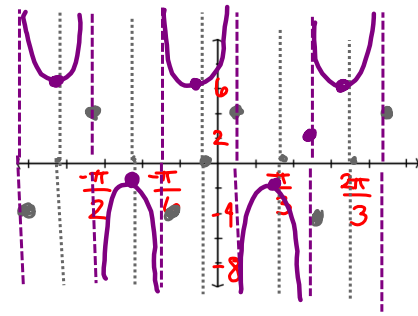$\frac{3\pi}{2}\div 3 = \frac{\pi}{2}$ 3 ticks

vert. shift:

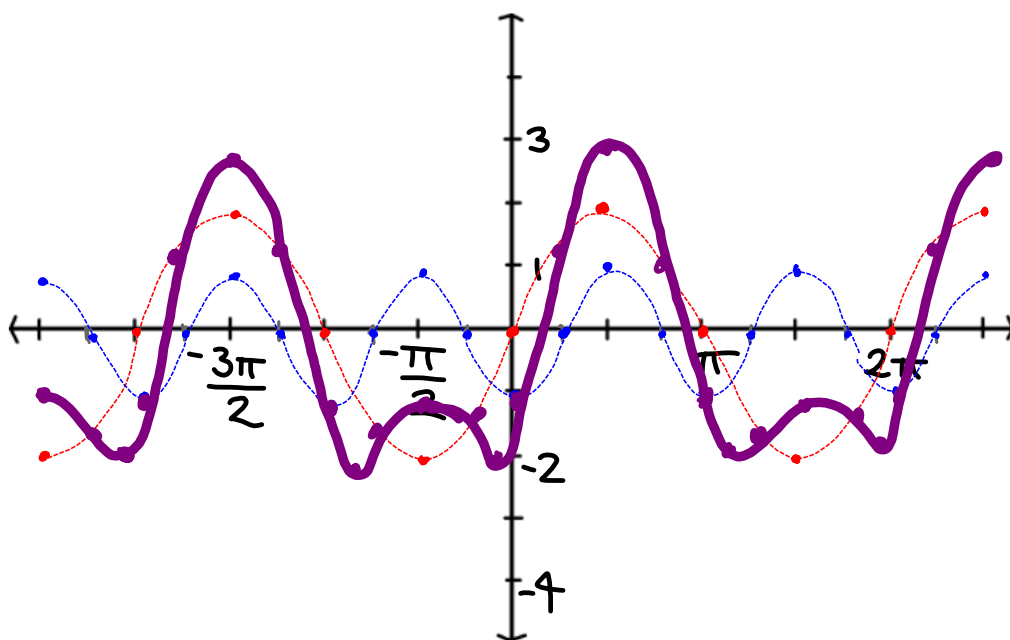up 2   1 tick

amplitude:

period:

horiz. shift:

vert. shift:

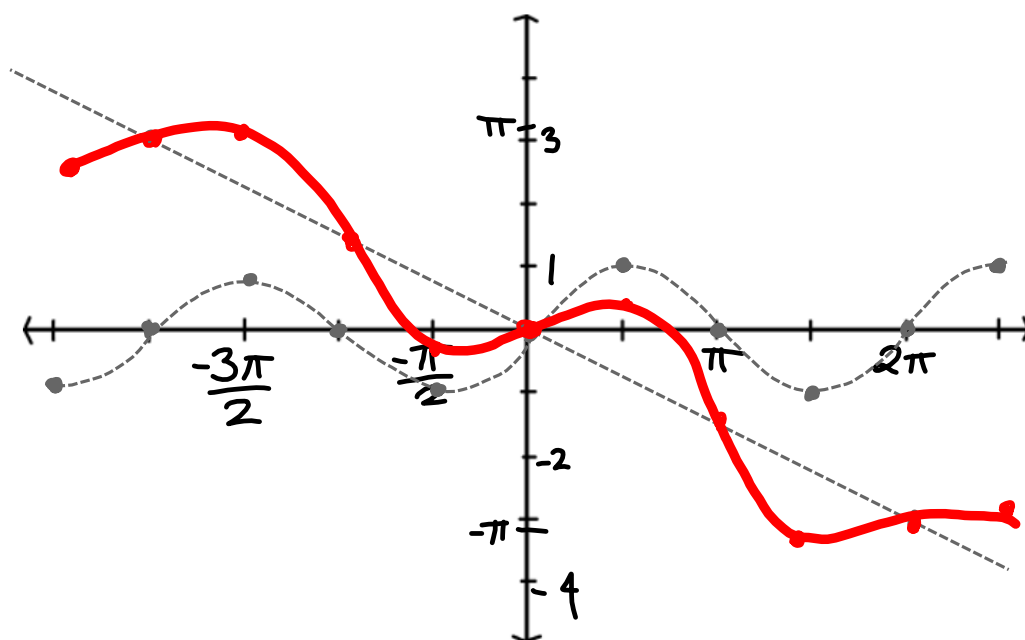y = 2sin x - cos 2x $= 2\sin x + (-\cos 2x)$

amp 2   amp 1

per 2π   per π

$$y = \sin x - \frac{1}{2}x = \sin x + \left(-\frac{1}{2}x\right)$$

Quiz Wednesday 12/11

Test Friday 12/13

Continue working on graphing handouts through #60