Assignments for the week of Sept. 12:
- 45 minutes of Khan Academy
- Read 5.7 and "Trig Guide to Graphing" on brewermath.com
- Due Fri. 16 Sept:
  5.7 #1-50 all; #53-64 all; 87-92 all
  Ch 5 Review (pages 467-468) #1-27odd;53,55

- Test #2 - This Friday, 9/16

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)

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

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

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

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

"amplitude:"

3

period:

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

horiz. shift:

vert. shift: (1 tick)

up 3/2

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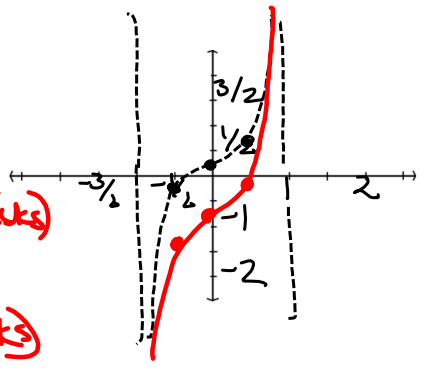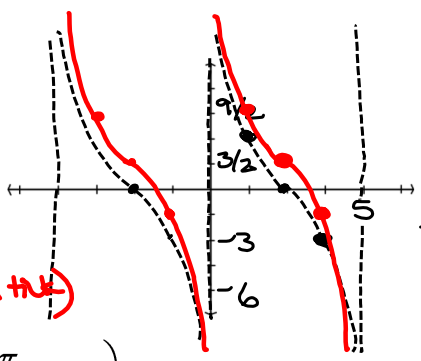
"amplitude:"

$\frac{1}{2}$

period:

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

horiz. shift:

$\frac{\pi}{\pi/2} = 2$ left (4 ticks)

vert. shift:

down 1

(2 ticks)

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

amplitude:

4

period:

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

horiz. shift:

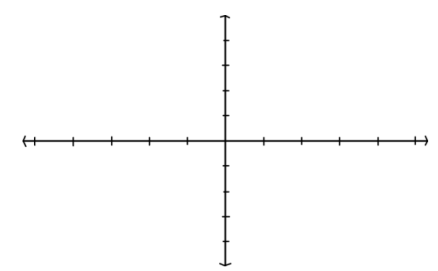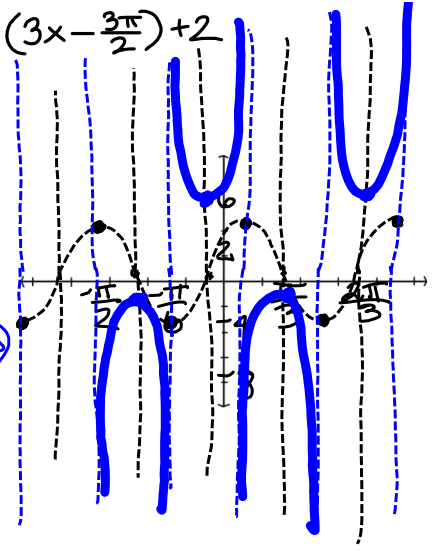$\frac{3\pi/2}{3} = \frac{\pi}{2}$ right

(3 ticks)

vert. shift:

up 2

(1 tick)

amplitude:

period:

horiz. shift:

vert. shift:

$y = \sin x + \cos x$