

Review:

Find the exact value of the following.

a.  $\cos 270^\circ$

0



b.  $\sin -225^\circ$

$\frac{1}{\sqrt{2}}$



c.  $\csc 315^\circ$

$-\sqrt{2}$



d.  $\sec 420^\circ$

2



e.  $\tan -135^\circ$

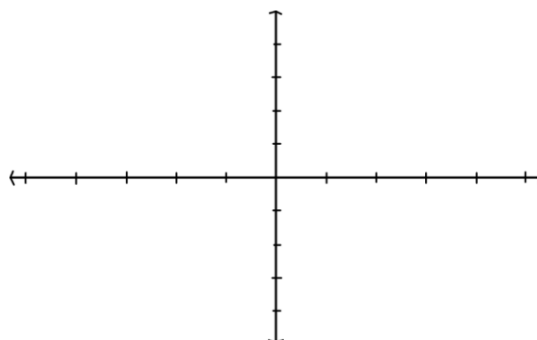
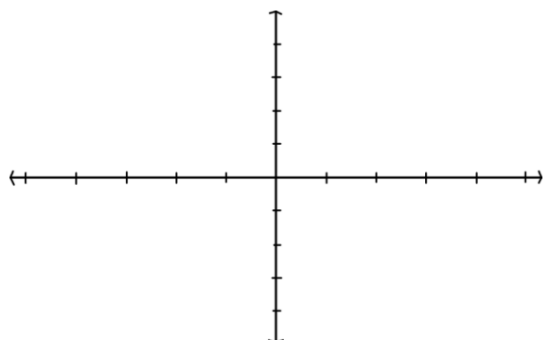
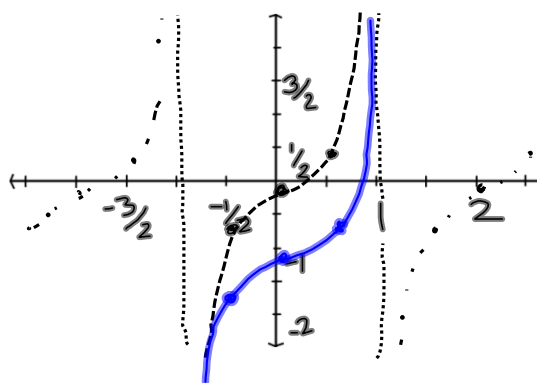
1



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

$$= \frac{1}{2} \tan \frac{\pi}{2}(x+2) - 1$$

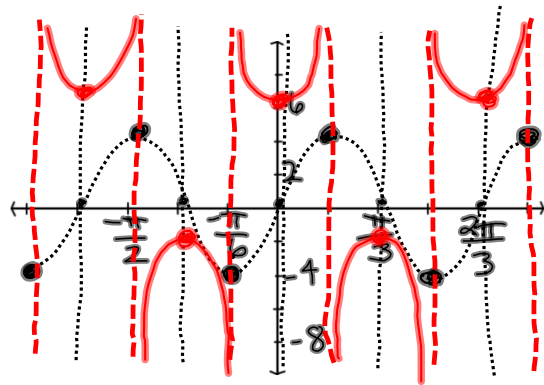
h. shift: left 2  
 $\frac{\pi}{\pi/2} = 2$   
 v. shift: down 1 2 ticks  
 "amp":  $\frac{1}{2}$   
 period:  $\frac{\pi}{\pi/2} = \frac{\pi}{1} \cdot \frac{2}{\pi} = 2$



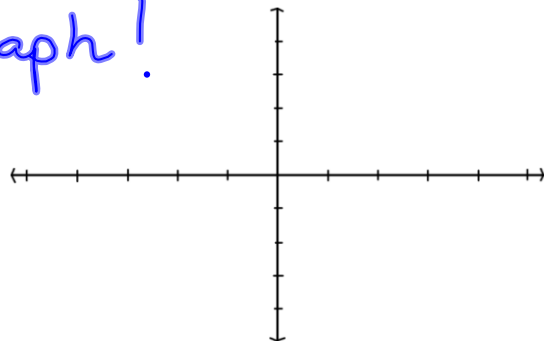
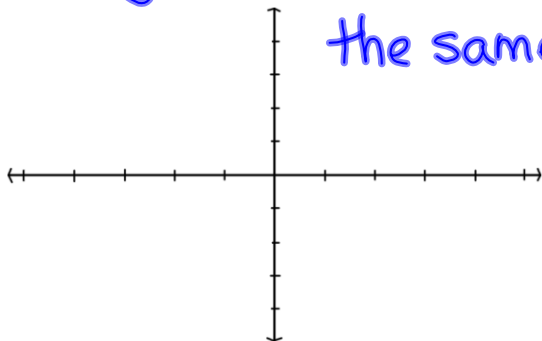
$$y = 4 \csc\left(3x - \frac{3\pi}{2}\right) + 2$$

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

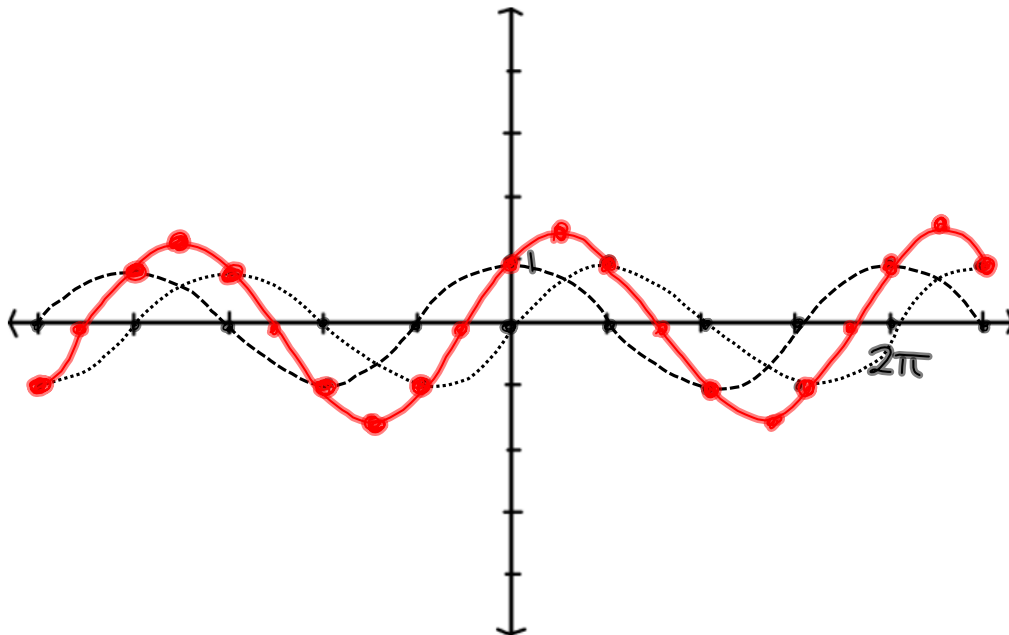
amp: 4  
 per:  $\frac{2\pi}{3}$   
 h. shift: right  $\frac{\pi}{2}$  3 ticks  
 v. shift: up 2 1 tick



$y = 4 \sec 3x + 2$  has the same graph!



$$y = \sin x + \cos x$$



$$y = 2\sin x - \cos 2x$$

amp 2, per  $2\pi$  ; amp 1, per  $\pi$

