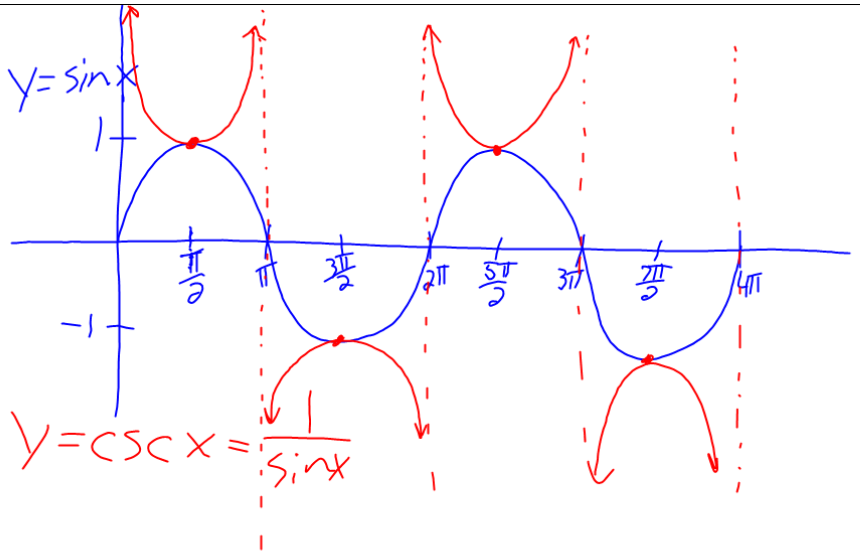
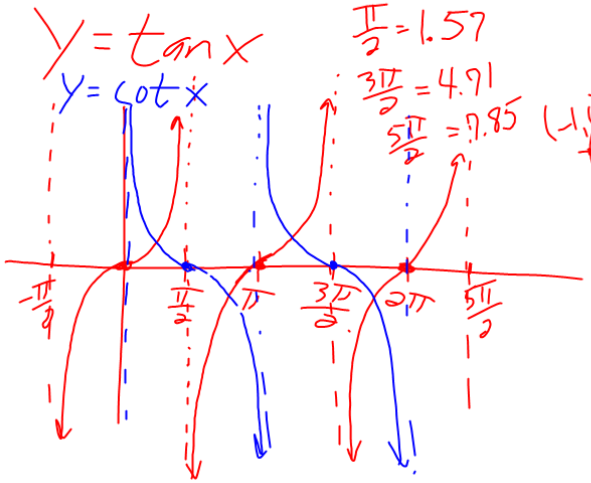


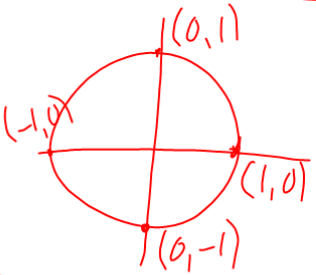
$y = \csc(kx - c) + h$
$y = \sec(kx - c) + h$

$\text{Period} = \frac{2\pi}{k}$

$P.S. = \frac{c}{k}$

$V.S = h$





$\tan 0 = 0$
$\tan \frac{\pi}{2} = \text{undef.}$
$\tan \pi = 0$
$\tan \frac{3\pi}{2} = \text{und}$
$\tan 2\pi = 0$

$y = \csc(k\theta - c) + h$
$y = \sec(k\theta - c) + h$

Period $= \frac{2\pi}{k}$

Phase Shift $= \frac{c}{k}$

Vert. Shift $= h$

$y = \tan(k\theta - c) + h$
$y = \cot(k\theta - c) + h$

Period $= \frac{\pi}{k}$

P.S. $= \frac{c}{k}$

V.S. $= h$

$$y = \csc\left(\frac{1\theta}{2} - \frac{\pi}{4}\right) + 2.$$ Find Period, P.S., V.S.

$k = \frac{1}{2}$ $c = \frac{\pi}{4}$ $h = 2$

Period $= \frac{2\pi}{1/2} = 2\pi \cdot \frac{2}{1} = 4\pi$

P.S. $= \frac{\pi/4}{1/2} = \frac{\pi}{4} \cdot \frac{2}{1} = \frac{\pi}{2}$

V.S. $= 2$

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

$k = \frac{1}{3}$ $c = -\frac{\pi}{4}$ $h = -3$

Per $= \frac{\pi}{1/3} = 3\pi$

P.S. $= \frac{-\pi/4}{1/3} = -\frac{\pi}{4} \cdot \frac{3}{1} = -\frac{3\pi}{4}$

V.S. $= -3$

5 Write an equation for a secant function with period π, phase shift $\frac{\pi}{3}$, and vertical shift -3.

$Per = \pi = \frac{2\pi}{k}$ $\quad P.S. = \frac{2}{3}\pi = \frac{c}{2}$ $\quad h = -3$

$k = \frac{2\pi}{\pi}$ $\quad \frac{2\pi}{3} = c$

$k = 2$

$y = \sec\left(2\theta - \frac{2\pi}{3}\right) - 3$

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p. 401 - 403

29 - 34 → no graph → Find Period, Phase Shift, Vert. Shift

36 - 43, 47, 49, 59