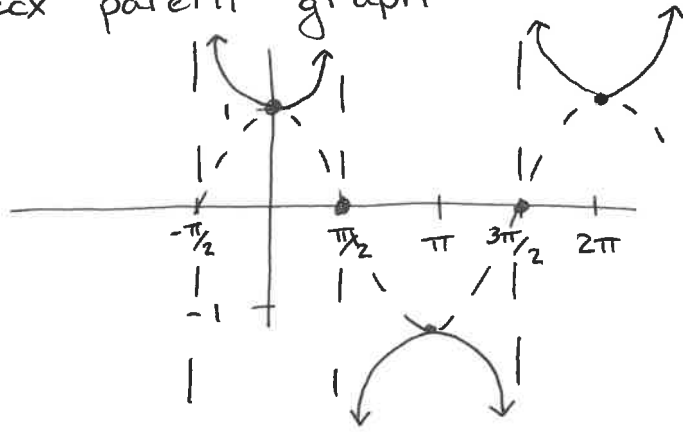


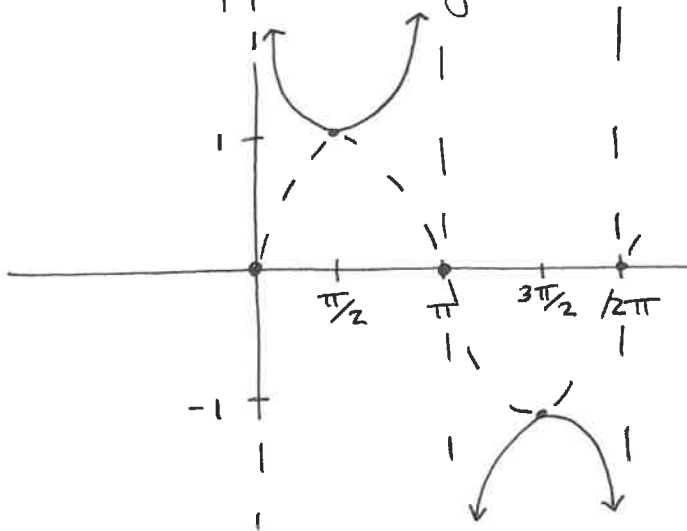
# 6.6 Cosecant and secant

$$\sec x = \frac{1}{\cos x} \quad \csc x = \frac{1}{\sin x}$$

$f(x) = \sec x$  parent graph



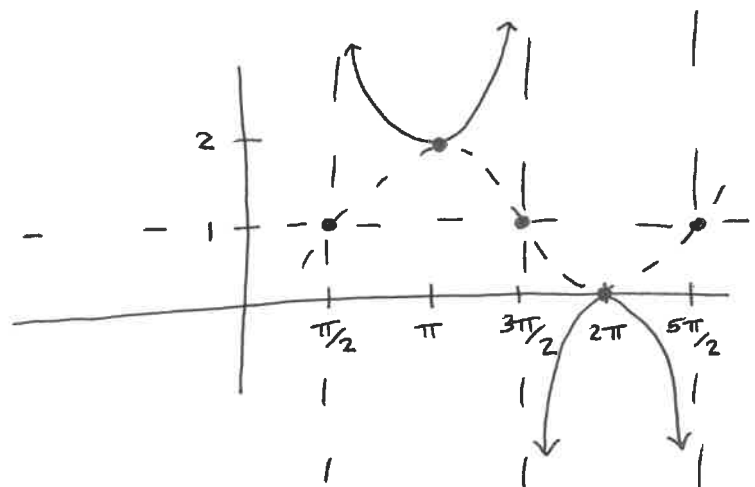
$f(x) = \csc x$  parent graph



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

p.s.  $\frac{\pi}{2}$

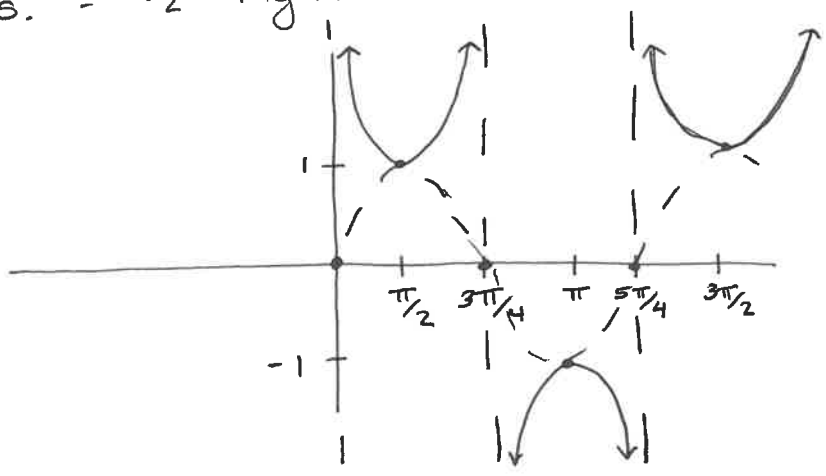
v.s. 1



$$y = \sec(2x - \pi)$$

$$\text{period} = \frac{2\pi}{2} = \pi$$

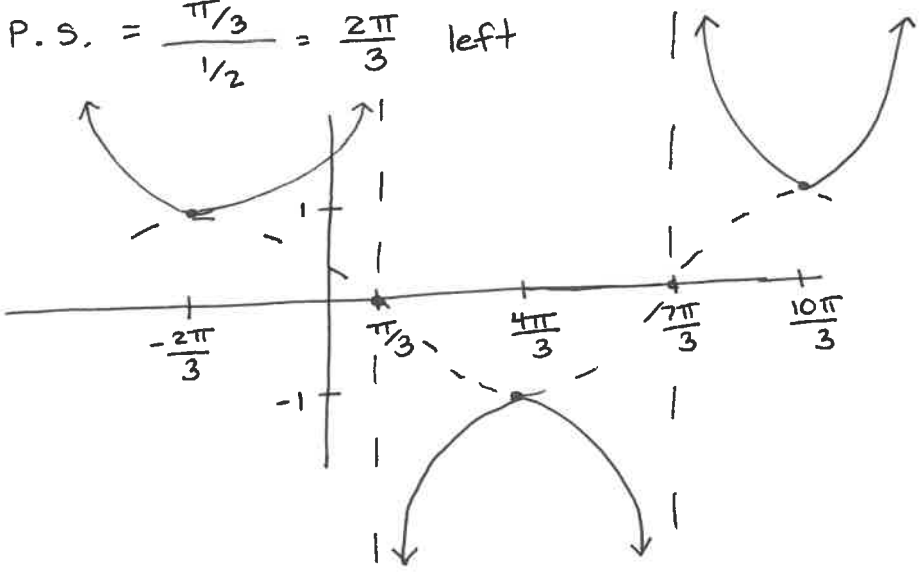
P.S. =  $\pi/2$  right



$$y = \sec(\frac{1}{2}x + \frac{\pi}{3})$$

$$\text{period} = 4\pi$$

P.S. =  $\frac{\pi/3}{1/2} = \frac{2\pi}{3}$  left



$$y = 3 \csc(2x + \pi/4)$$

$$\text{Amp} = 3$$

$$\text{Period} = \pi$$

$$\text{P.S.} = \frac{\pi/4}{2} = \pi/8$$

