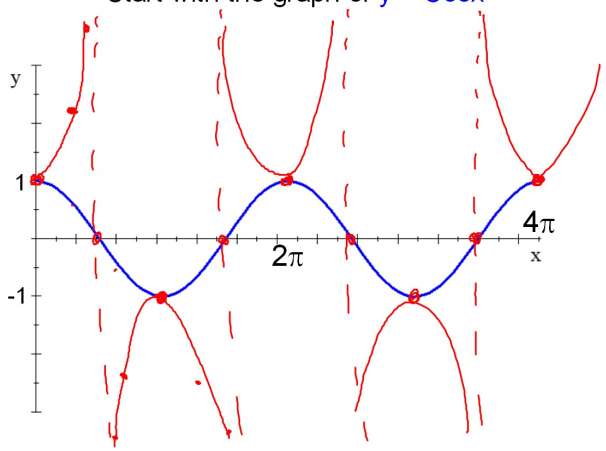
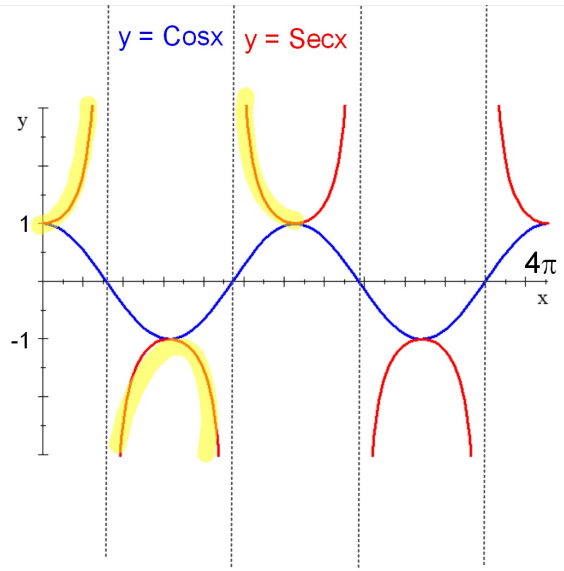
Graphs of the Inverse Trig Functions: y = Secx

Start with the graph of y = Cosx





VA: $\frac{\pi}{2}, \frac{3\pi}{2}, \frac{5\pi}{2}, \ldots$
Where Cosx=0

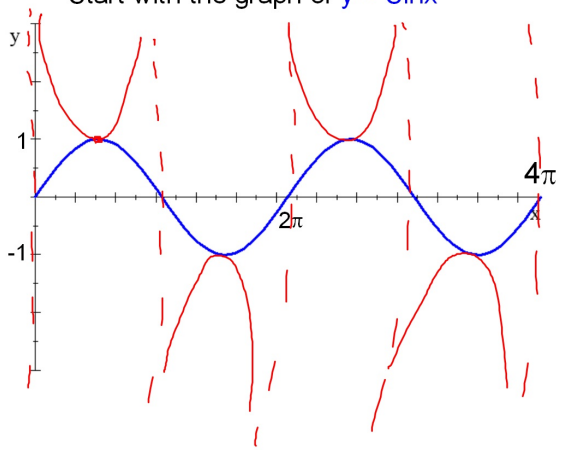
Max: $\pi, 3\pi, 5\pi, \ldots$
Where Cosx is a MIN

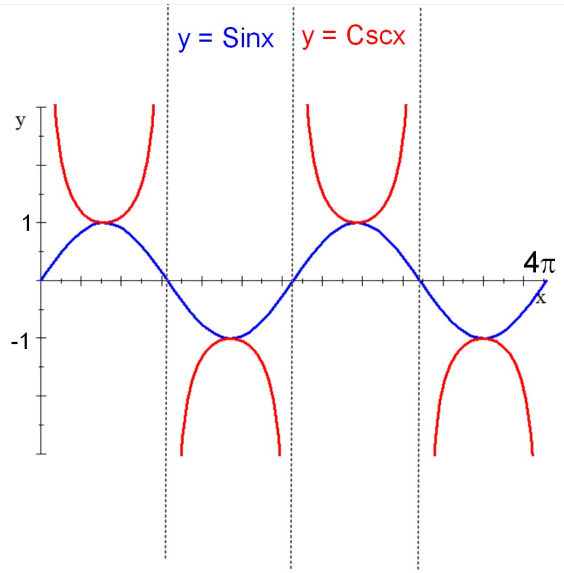
Min: $0, 2\pi, 4\pi, \ldots$
Where Cosx in a MAX

Period of Secx: 2π

Graphs of the Inverse Trig Functions: y = Cscx

Start with the graph of y = Sinx





VA: $0, \pi, 2\pi, \ldots$
Where Sinx=0

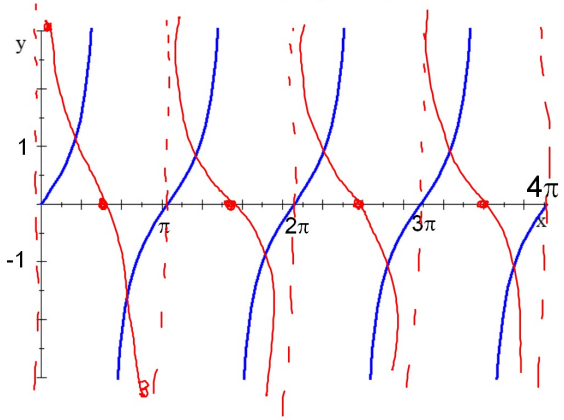
Max: $\frac{3\pi}{2}, \frac{7\pi}{2}, \frac{11\pi}{2}$
Where Sinx is a MIN

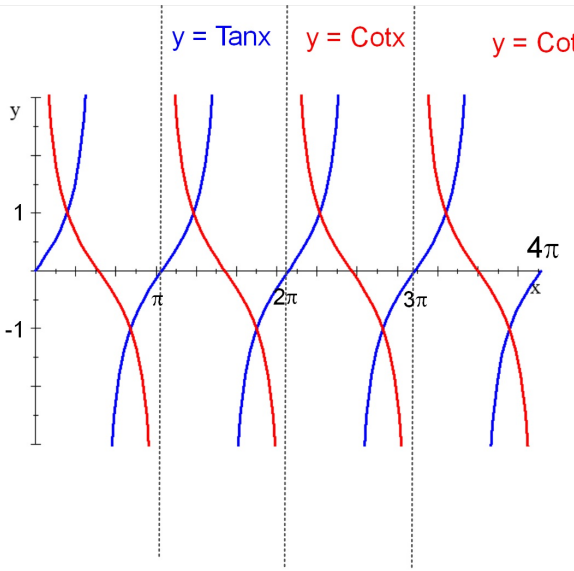
Min: $\frac{\pi}{2}, \frac{5\pi}{2}, \frac{9\pi}{2}$
Where Sinx is a MAX

Period of Cscx: 2π

Graphs of the Inverse Trig Functions: y = Cotx

Start with the graph of y = Tanx





$y = \text{Cotx} = \dfrac{\text{Cosx}}{\text{Sinx}}$

VA: $0, \pi, 2\pi, \ldots$

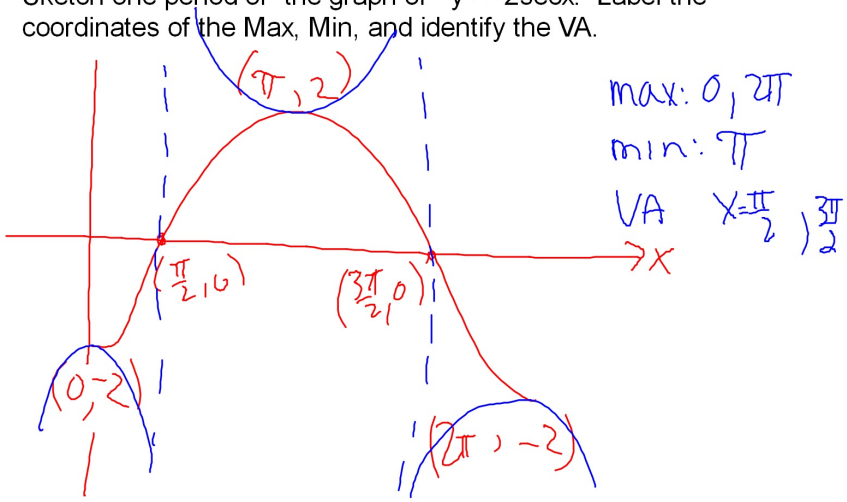
Where Sinx=0

Zeros: $\frac{\pi}{2}, \frac{3\pi}{2}, \frac{5\pi}{2}, \ldots$

Where Cosx=0

Period of Cotx: π

Sketch one period of the graph of y = -2secx. Label the coordinates of the Max, Min, and identify the VA.



Sketch one period of y = 5Csc(2x). Label the coordinates of the Max, Min, and identify the VA.