

College Algebra

Name: Key

8.4 Cosecant & Secant Graphs

Date: _____ Period: _____

Find the important information for one period of the equation, then graph.

1.) $y = 3 \overset{\text{cos}}{\text{sec}} x - 1$

Amplitude: DNE (3)

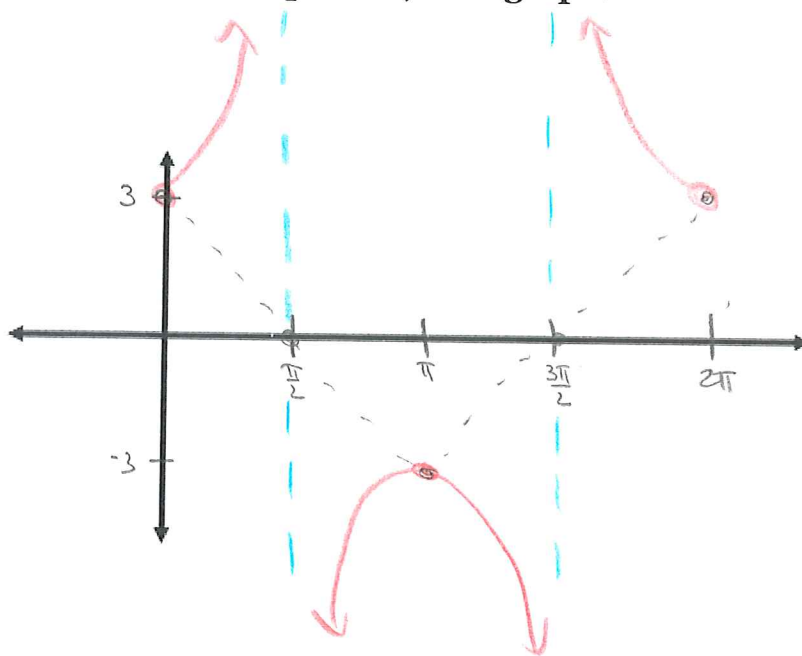
Period: 2π

H.S.: none

V.S.: $\downarrow 1$

Domain: $[0, \frac{\pi}{2}) \cup (\frac{\pi}{2}, \frac{3\pi}{2}) \cup (\frac{3\pi}{2}, 2\pi]$

Range: $(-\infty, -3] \cup [3, \infty)$



2.) $y = \overset{\sin 2(x + \frac{\pi}{4})}{\text{csc}} \left(2x + \frac{\pi}{2} \right)$

Amplitude: DNE (1)

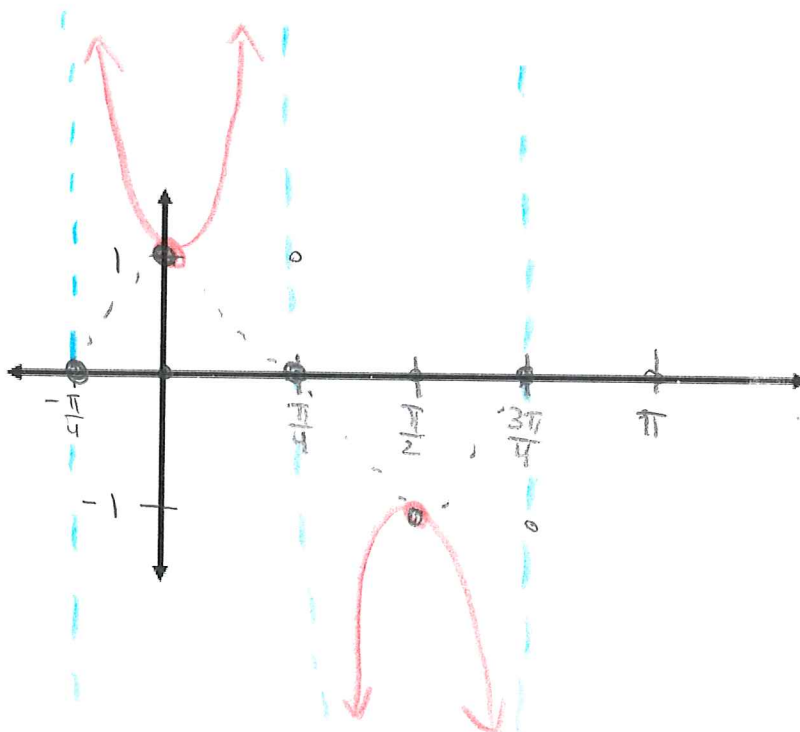
Period: $\frac{2\pi}{2} = \pi$

H.S.: $\frac{\pi}{4} \leftarrow$

V.S.: none

Domain: _____

Range: _____



$$\sin \frac{1}{3}(x + 3\pi)$$

3.) $y = 2 \csc\left(\frac{1}{3}x + \pi\right) + 1$

Amplitude: DNE (2)

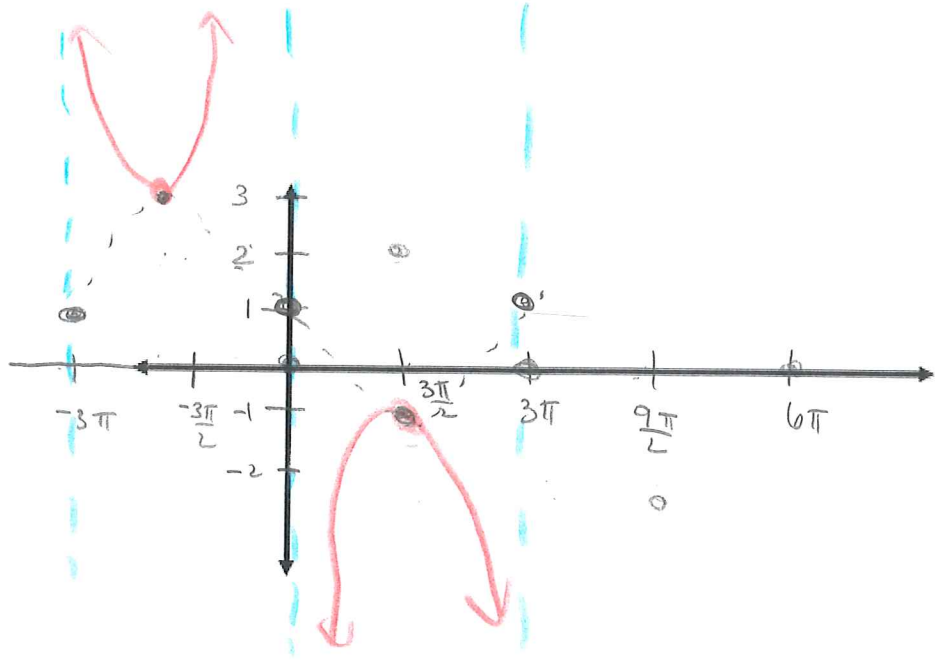
Period: $\frac{2\pi}{1/3} = 6\pi$

H.S.: $3\pi \leftarrow$

V.S.: $\uparrow 1$

Domain: $(-3\pi, 0) \cup (0, 3\pi)$

Range: $(-\infty, -1] \cup [3, \infty)$



4.) $y = \frac{1}{2} \sec(2x - \pi)$

Amplitude: DNE (1/2)

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

H.S.: $\frac{\pi}{2} \rightarrow$

V.S.: none

Domain: $\left[\frac{\pi}{2}, \frac{3\pi}{4}\right) \cup \left(\frac{3\pi}{4}, \frac{5\pi}{4}\right) \cup \left(\frac{5\pi}{4}, \frac{3\pi}{2}\right]$

Range: $(-\infty, -\frac{1}{2}] \cup [\frac{1}{2}, \infty)$

