

Warm - Up

March 17, 2017

Graph.

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

$$A = -3 \quad b = \frac{1}{2} \quad c = \pi \quad d = 2$$

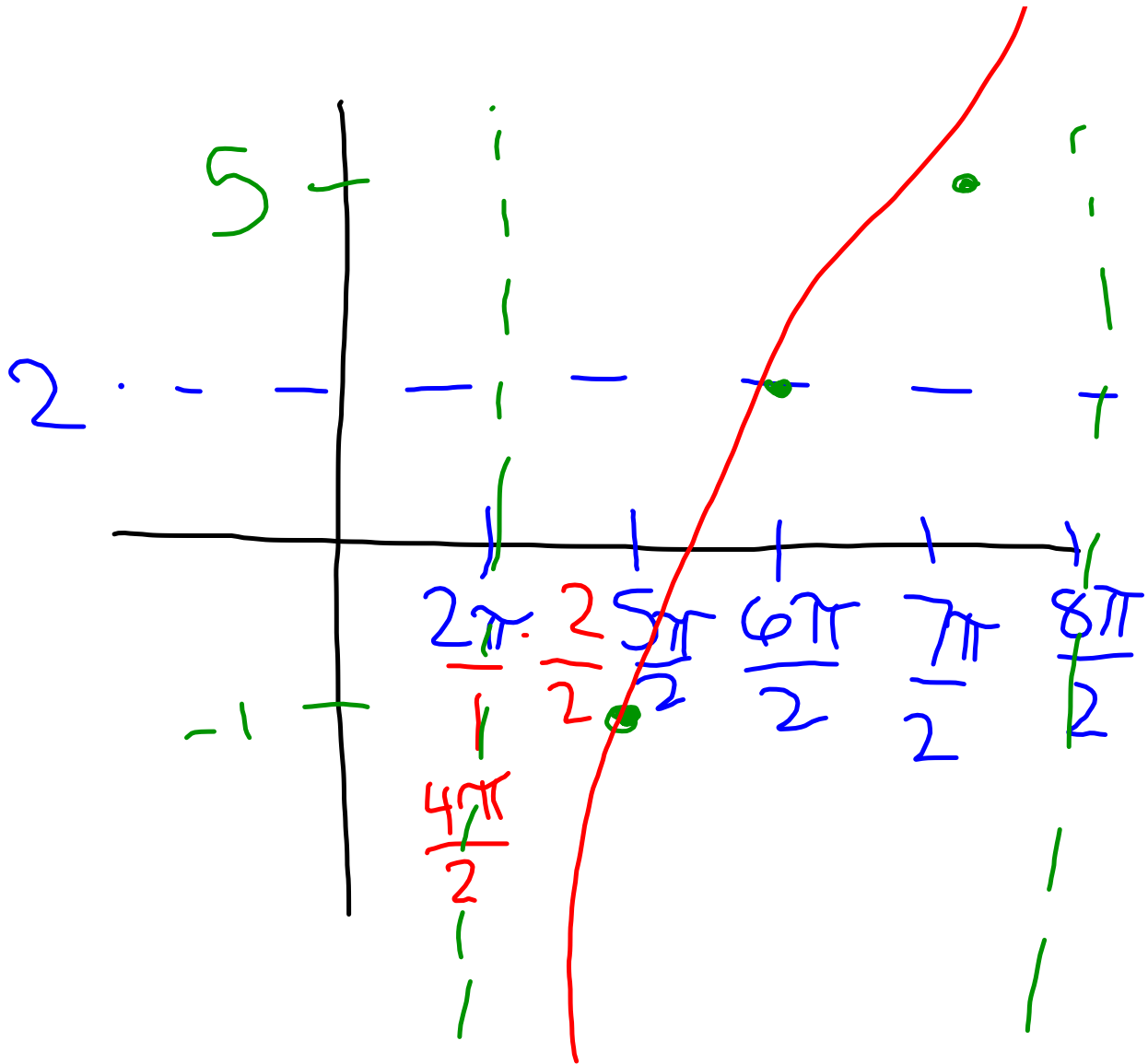
$$\text{amp} = 3 \quad \text{per} = \frac{\pi}{\frac{1}{2}}$$

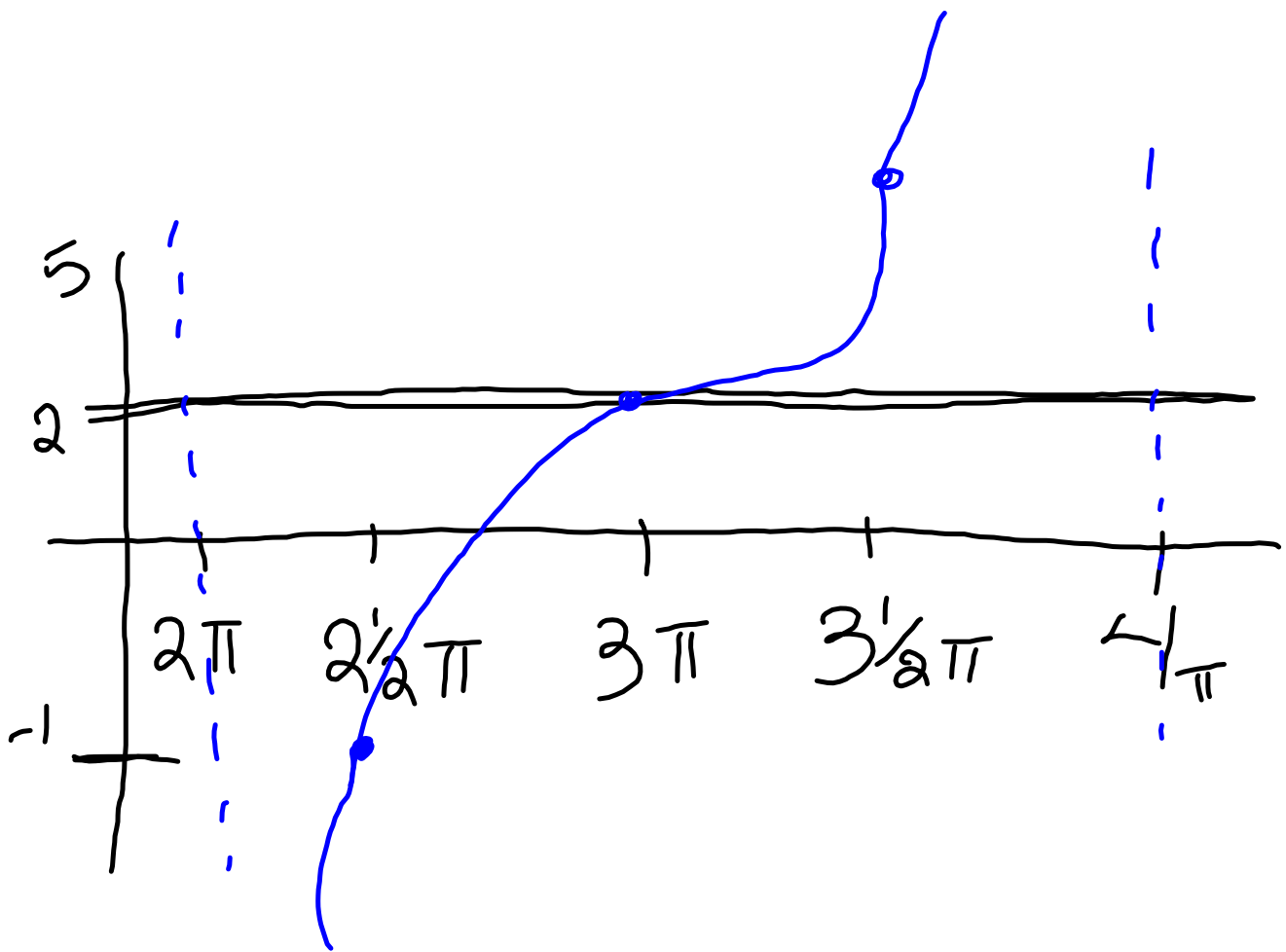
$$\frac{2\pi}{4} = \frac{\pi}{2}$$

$$\frac{\pi}{\frac{1}{2}} = 2\pi = \text{PS}$$

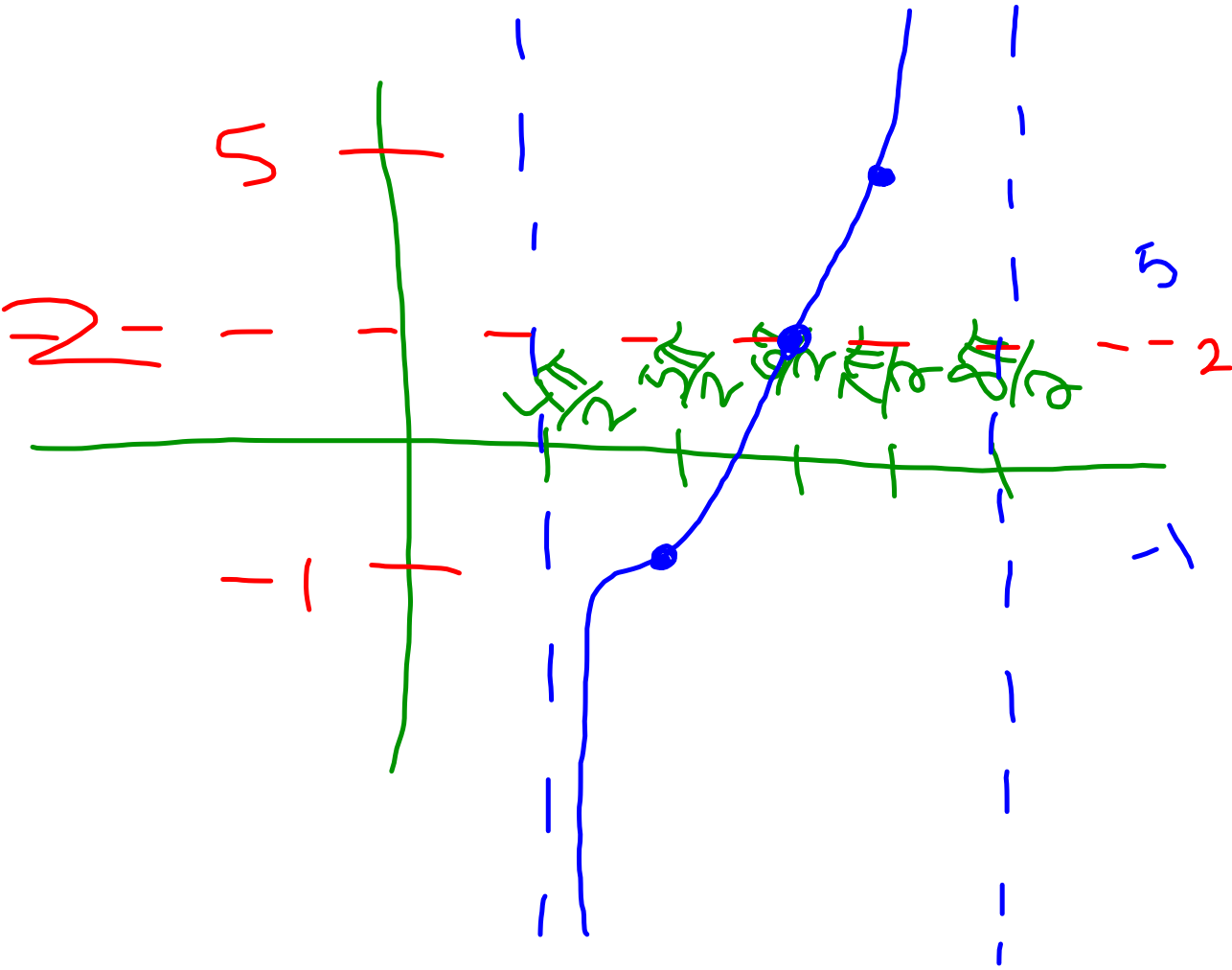
$$2 \text{ up} = \text{VS}$$

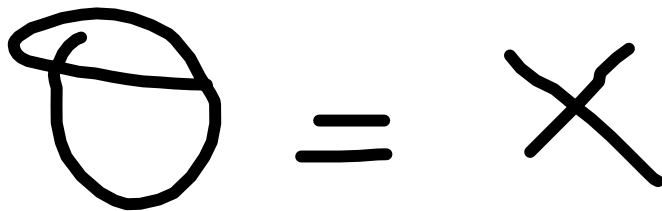
$$\frac{2}{1} \cdot \frac{\pi}{1} = 2\pi$$





$$\frac{2\pi - 2}{1 \cdot 2} = \frac{4\pi}{2}$$





$y = \csc x$

asymptote

$0^\circ, 180^\circ, 360^\circ, \dots$

$0, \pi, 2\pi, \dots$

$$X = (\text{first}) + n \left(\frac{\text{Per}}{2} \right)$$

Asymptotes

$$y = \sec x$$

$$\text{asy} = \frac{\pi}{2}, \frac{3\pi}{2}, \frac{5\pi}{2}, \frac{7\pi}{2}, \dots$$

$$X = (\text{first}) + n \left(\frac{\text{per}}{2} \right)$$

$$y = \csc x$$

$$\text{asy} = 0, \pi, 2\pi, 3\pi, 4\pi, \dots$$

A asymptotes

$$y = \tan x$$

$$\text{asy} = \frac{\pi}{2}, \frac{3\pi}{2}, \frac{5\pi}{2}, \dots$$

$$x = (\text{First}) + n (\text{per})$$

$$y = \cot x$$

$$\text{asy} = 0, \pi, 2\pi, \dots$$

$$\frac{1}{2} \tan(2x - \pi) + 3$$

First: $bx - c = \frac{\pi}{2}$

$$2x - \pi = \frac{\pi}{2}$$

$$\frac{1}{2} \cdot 2x = \frac{3\pi}{2} \cdot \frac{1}{2}$$

$$x = \frac{3\pi}{4}$$

Per: $\frac{\pi}{2}$

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

sec & csc

$$x = (\text{first}) + n \left(\frac{\text{per}}{2} \right)$$

any whole # \leftarrow

csc

first: $bx - c = 0$

sec

first: $bx - c = \frac{\pi}{2}$

$$\text{per} = \frac{2\pi}{b}$$

tan & cot

$$X = (\text{first}) + n(\text{per})$$

any
whole # ←

tan

$$\text{first: } bx - c = \frac{\pi}{2}$$

cot

$$\text{first: } bx - c = 0$$

$$\text{Per} = \frac{\pi}{b}$$

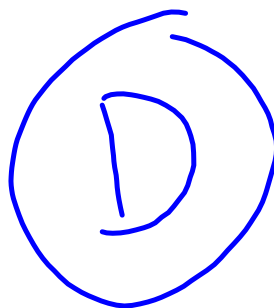
$$y = \csc 2x - 4$$

$$bx - c = 0$$

$$\frac{2x}{2} = \frac{0}{2} = 0 = x = \text{first}$$

$$\text{Per} = \frac{2\pi}{3} = \frac{2\pi}{2} = \pi$$

$$x = 0 + n\left(\frac{\pi}{2}\right)$$



$$\textcircled{1} y = \frac{1}{2} \tan(x) + 3$$

First: $bx - c = \pi$
 $x = \frac{\pi}{2}$

per: $\frac{\pi}{1} = \pi$

$$x = \frac{\pi}{2} + n(\pi)$$

\textcircled{B}

$$\textcircled{2} \quad y = 2 \sec x$$

$$\text{first: } bx - c = \frac{\pi}{2}$$

$$x = \frac{\pi}{2}$$

$$\text{Per} = \frac{2\pi}{b} = \frac{2\pi}{1} = 2\pi$$

$$x = \frac{\pi}{2} + n \left(\frac{2\pi}{2} \right)$$

$$x = \frac{\pi}{2} + n\pi$$

B.

$$\textcircled{16} \quad y = 5 \sec(2x + \pi) + 1$$

$$a = 5 \quad b = 2 \quad c = \pi \quad d = 1$$

first: $bx - c = \frac{\pi}{2}$

$$2x + \pi = \frac{\pi}{2}$$

$$\frac{2x}{2} = \frac{\frac{\pi}{2} - \pi}{2}$$

$$x = \frac{-\frac{1}{2}\pi}{4}$$

$$\text{Per} = \frac{2\pi}{b} = \frac{2\pi}{2} = \pi$$

$$X = \frac{-\frac{1}{2}\pi}{4} + n\left(\frac{\pi}{2}\right) \quad C.$$

$$\textcircled{1} \quad y = \frac{1}{2} + \tan(x) + 3$$

$$\text{first: } bx - c = \frac{\pi}{2}$$

$$x = \frac{\pi}{2}$$

$$\text{Per} = \frac{\pi}{b} = \frac{\pi}{1} = \pi$$

$$x = \frac{\pi}{2} + n(\pi)$$

B.