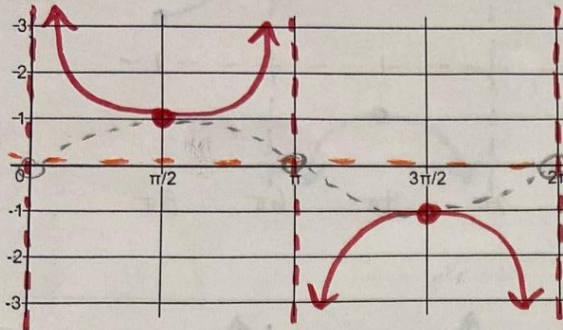


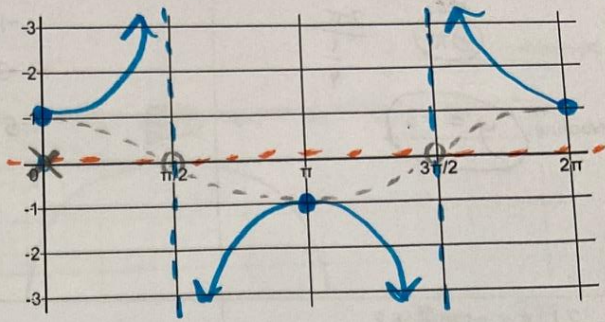
UNIT Review 4.4 - Graphing Recip. Trig. Functions and Tangent

I. Basics:

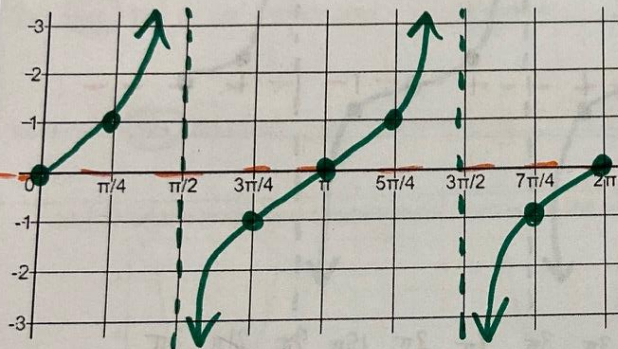
1.) Graph one cycle of $y = \csc \theta$



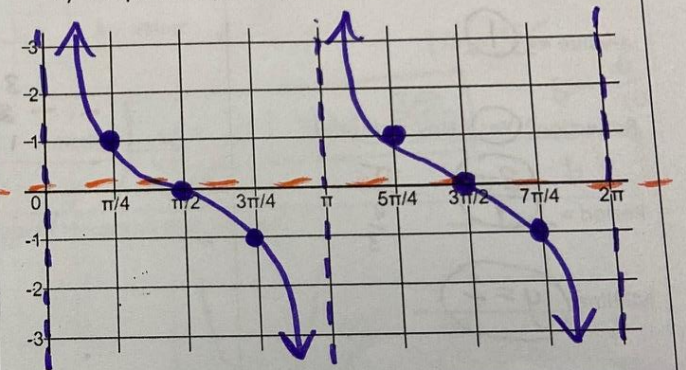
2.) Graph one cycle of $y = \sec \theta$



3.) Graph two cycles of $y = \tan \theta$



4.) Graph two cycles of $y = \cot \theta$



II. Graphing:

Find all the unknowns. Then set the x and y axis up for each graph and label accurately with simplified units. Then plot at least one cycle if it is a sec or csc function, and two cycles if it is a tan or cot function. Also, draw the midline on your graphs. Write the x-axis labels below the coordinate grids and y-axis labels to the left.

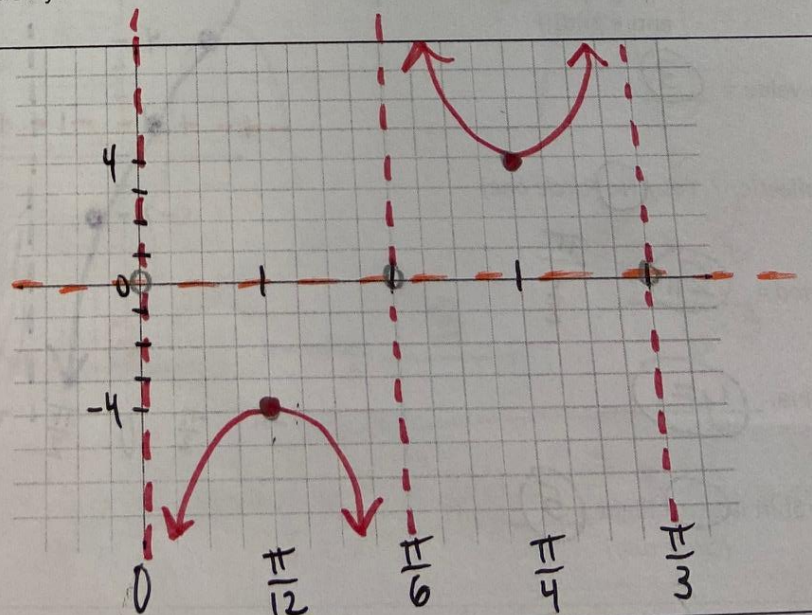
5.) $y = -4 \csc 6\theta$

a-value = 4

Reflection? Yes / No (circle one)

Period = $\frac{\pi}{3}$ = $\frac{2\pi}{6}$

Midline: $y=0$



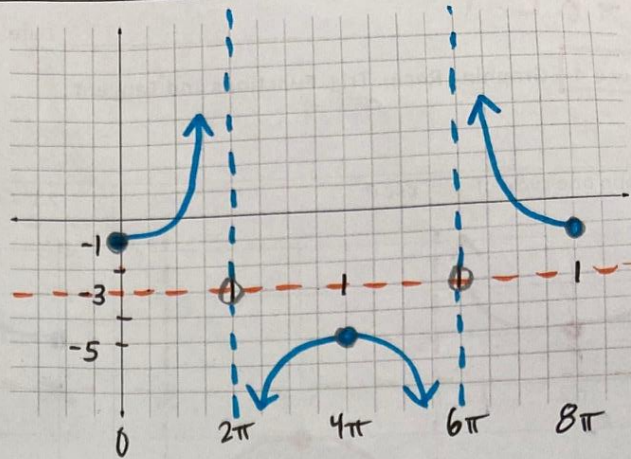
6.) $y = 2 \sec \frac{\theta}{4} - 3$

a-value = (2)

Reflection? Yes No (circle one)

Period = (8π) $\frac{2\pi}{\frac{1}{4}}$

Midline: ($y = -3$)



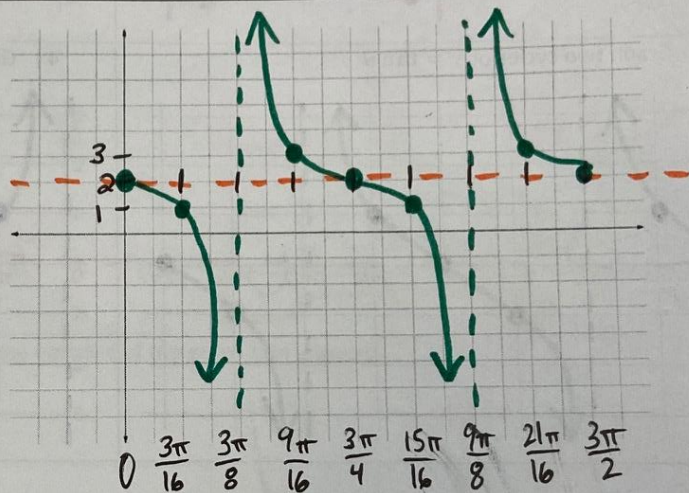
7.) $y = -\tan \frac{4\theta}{3} + 2$

a-value = (1)

Reflection? Yes No (circle one)

Period = ($\frac{3\pi}{4}$) $\frac{\pi}{\frac{4}{3}}$

Midline: ($y = 2$)



8.) $y = 3 \cot \frac{1}{2}(\theta + \frac{5\pi}{4}) + 1$

↳ Left 5

- Plot graph using the entire grid!!!

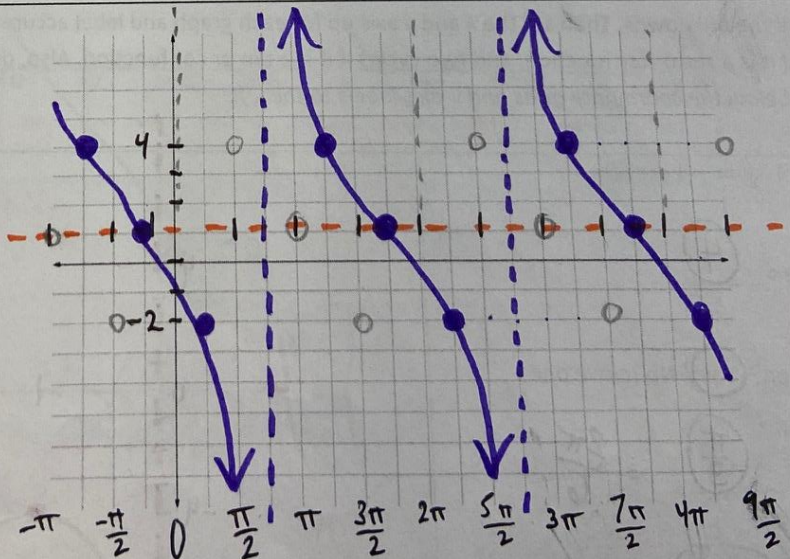
a-value = (3)

Reflection? Yes No (circle one)

Period = (2π) $\frac{\pi}{\frac{1}{2}}$

Midline: ($y = 1$)

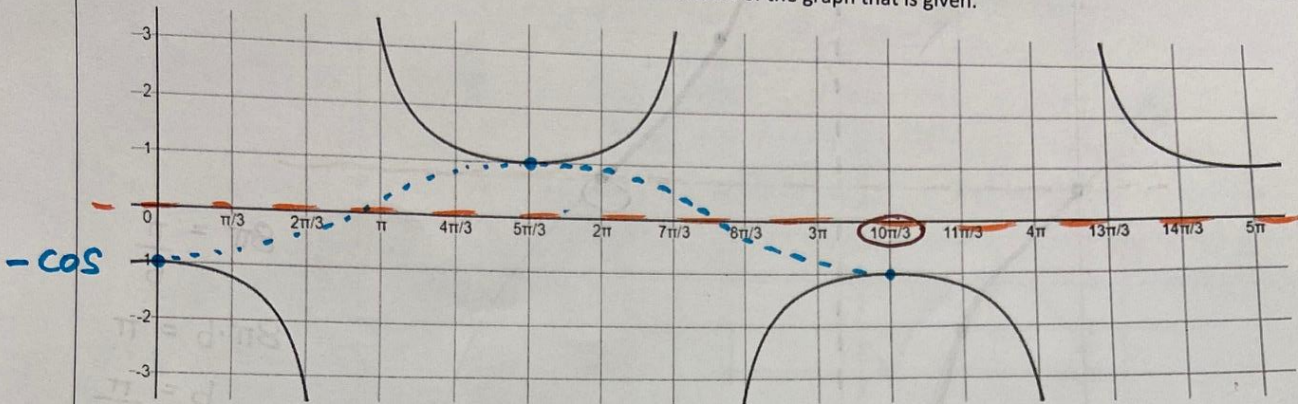
Phase Shift is Left Right (5) units (circle one)



III. Given a Graph, Write the Function:

Given these graphs, fill in all the blanks and then write the correct function, starting with "y =".

9.) Given the graph find all unknowns. Then write the function of the graph that is given.



Csc, Sec, Tan or Cot ? (circle one)

a - value: 1

b - value: $\frac{3}{5}$

$$\frac{10\pi}{3} = \frac{2\pi}{b}$$

$$10b = 6$$

$$b = \frac{6}{10}$$

$$b = \frac{3}{5}$$

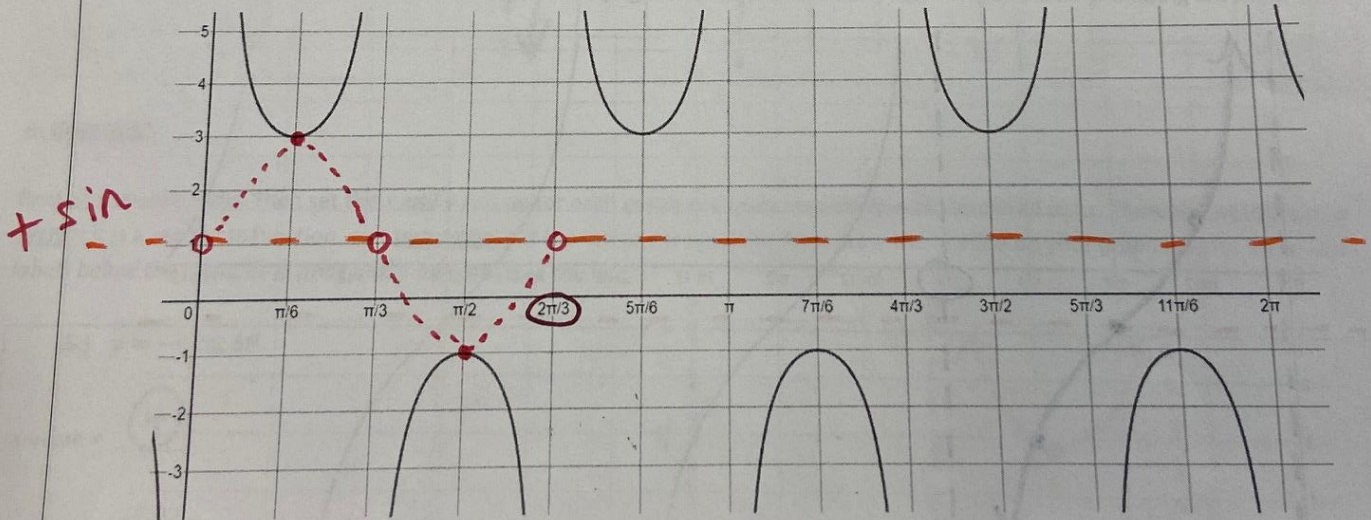
Reflection? Yes / No (circle one)

Midline: $y = 0$

Function:

$$y = -1 \sec \frac{3\theta}{5}$$

10.) Given the graph find all unknowns. Then write the function of the graph that is given.



Csc, Sec, Tan or Cot ? (circle one)

a - value: 2

b - value: 3

$$\frac{2\pi}{3} = \frac{2\pi}{b}$$

$$b = 3$$

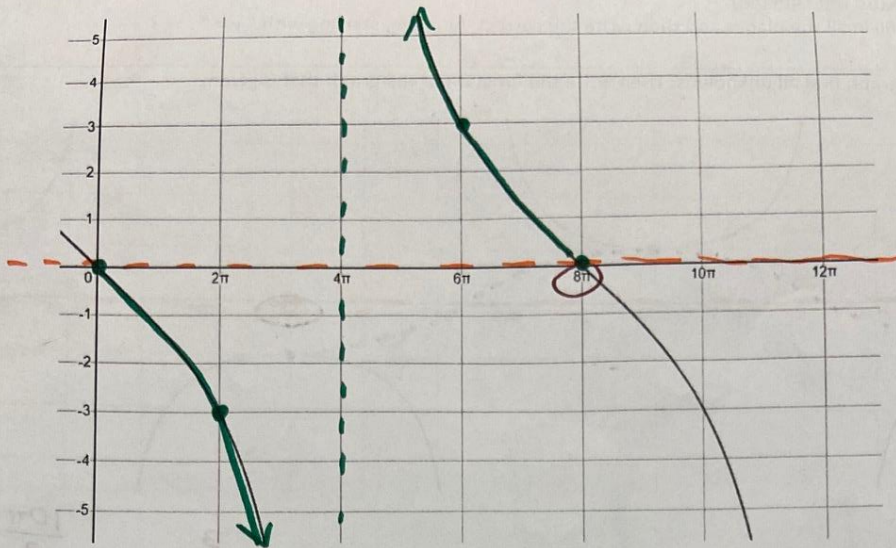
Reflection? Yes / No (circle one)

Midline: $y = 1$

Function:

$$y = 2 \csc 3\theta + 1$$

11.) Given the graph find all unknowns. Then write the function of the graph that is given.



$$8\pi = \frac{\pi}{b}$$

$$8\pi \cdot b = \pi$$

$$b = \frac{\pi}{8\pi}$$

$$b = \frac{1}{8}$$

Csc, Sec, Tan or Cot? (circle one)

a-value: 3

b-value: 1/8

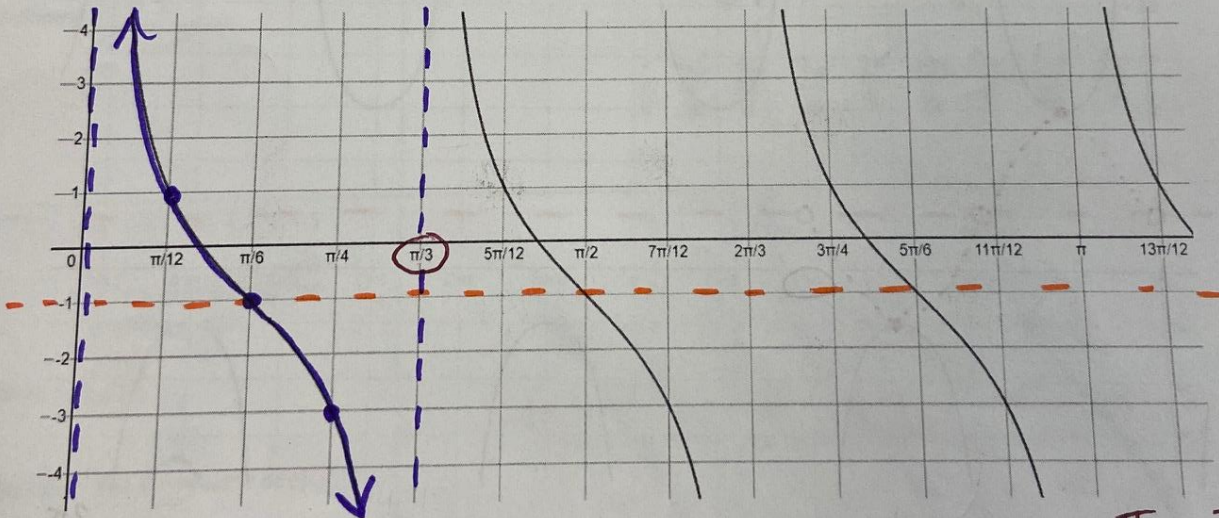
Reflection? Yes No (circle one)

Midline: y = 0

Function:

$$y = -3 \tan \frac{\theta}{8}$$

12.) Given the graph find all unknowns. Then write the function of the graph that is given.



$$\frac{\pi}{3} = \frac{\pi}{b}$$

Csc, Sec, Tan or Cot? (circle one)

a-value: 2

b-value: 3

Reflection? Yes No (circle one)

Midline: y = -1

Function:

$$y = 2 \cot 3\theta - 1$$