

## Requirements for a Correct Trigonometric Graph

In order to receive full credit for a graph, you must do all of the following.

- 1.) Label your axes.
- 2.) Show at least one period.
- 3.) Label five ordered pairs or asymptotes (as appropriate).

## Generalized Formulas for Graphs

$$y = a \sin(bx - c) + d \qquad y = a \csc(bx - c) + d$$

$$y = a \cos(bx - c) + d \qquad y = a \sec(bx - c) + d$$

$$y = a \tan(bx - c) + d \qquad y = a \cot(bx - c) + d$$

amplitude = $ a $
period $\frac{2\pi}{b}$ or $\frac{\pi}{b}$
tick marks $\frac{\text{period}}{4}$
endpoints $bx - c = 0$ and $bx - c = 2\pi$ $bx - c = \frac{-\pi}{2}$ and $bx - c = \frac{\pi}{2}$ $bx - c = 0$ and $bx - c = \pi$
vertical shift = $d$

Inverse Functions (Restrictions)
$-1 \leq x \leq 1$ $-\frac{\pi}{2} \leq y \leq \frac{\pi}{2}$
$-1 \leq x \leq 1$ $0 \leq y \leq \pi$
$-\infty < x < \infty$ $-\frac{\pi}{2} < y < \frac{\pi}{2}$