

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

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

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

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

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

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

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

amplitude = $ a $	amplitude only exists for sine and cosine changes the y axis on all graphs if $a < 0$, reflection about x-axis
period	$\frac{2\pi}{b}$ for sin, cos, csc, sec $\frac{\pi}{b}$ for tangent and cotangent
tick marks	$\frac{\text{period}}{4}$ for all trig functions
endpoints	$bx - c = 0$ and $bx - c = 2\pi$ for sin, cos, csc, sec graphs $bx - c = \frac{\pi}{2}$ and $bx - c = \frac{3\pi}{2}$ for tangent graph $bx - c = 0$ and $bx - c = \pi$ for cotangent graph
vertical shift	d for all trig functions