

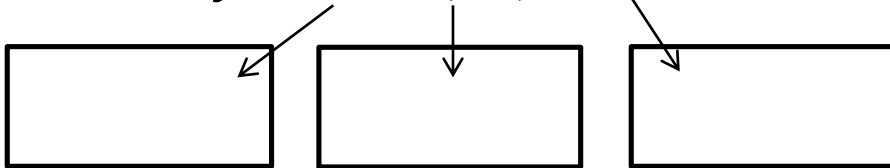
Objective: To graph trigonometric functions with vertical shifts and reflections.

Vocabulary:

Midline: the horizontal axis that is used as a reference line about which the graph of a periodic function oscillates.

Transformed Equation

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



Identify the amplitude, period, and vertical shift for each of the following examples. Then, graph the function.

Example 1: $f(x) = 3 \cos 2x + 1$

Amplitude: _____

Period: _____

Vertical Shift: _____

Example 2: $g(x) = -2 \cos\left(\frac{x}{2}\right) - 2$

Amplitude: _____

Period: _____

Vertical Shift: _____

