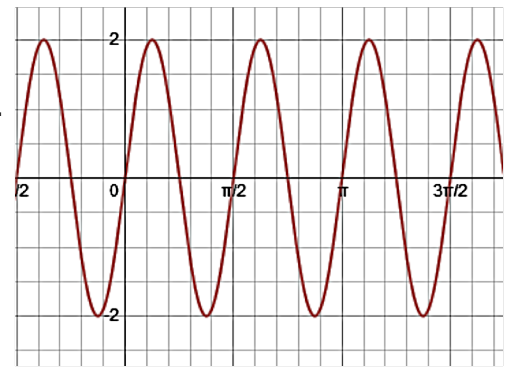


**Objective:** To write equations of trigonometric functions.

**Warm up:** Record at least three observations that you made about the graph on the board.

**Example 1:** Identify the period and amplitude of the following function.



**Example 2:** Write a sine equation for the following values.

Amplitude = 1 , no reflection

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

Phase Shift left by  $\frac{\pi}{2}$

Vert. shift up 21

**Example 3:** Write a cosine equation for the following values.

Amplitude = 5 , reflection

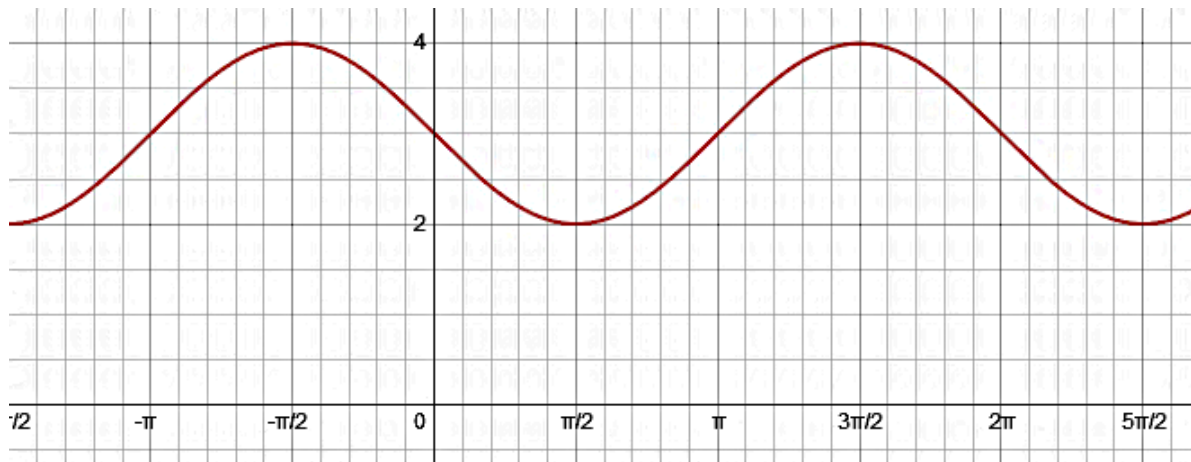
Period =  $3\pi$

Phase Shift right by  $\frac{\pi}{4}$

Vert. shift down 3

**Example 4:** Identify the phase shift and vertical shift from the given cosine graph, then write its equation:

Amplitude = \_\_\_\_\_ Vertical Shift = \_\_\_\_\_ Phase Shift = \_\_\_\_\_ Period = \_\_\_\_\_



**Example 5:** Write an equation for this sine graph.

Amplitude = \_\_\_\_\_ Vertical Shift = \_\_\_\_\_ Phase Shift = \_\_\_\_\_ Period = \_\_\_\_\_

