

Find the amplitude, period and phase shift of the function.

$$1) y = 3 \sin \left(x - \frac{\pi}{2} \right)$$

$$2) y = -2 \sin \left(4x - \frac{\pi}{2} \right)$$

$$3) y = 4 \cos \left(\frac{1}{4}x + \frac{\pi}{4} \right)$$

$$4) y = -\frac{3}{4} \sin \left(\frac{1}{4}x + \frac{\pi}{2} \right)$$

Graph the function. Show at least one period.

Show all steps followed in class, or use your own strategy as long as you show all your reasoning. Clearly indicate what the amplitude, period and phase shift are.

Also include the window of the calculator that will show the cycle produced.

$$5) y = 2\cos\left(3x + \frac{\pi}{2}\right)$$

$$6) y = 3 \sin \left(\frac{1}{2}x + \frac{\pi}{4} \right)$$

Write the equation of a sine function with the given characteristics.

7) Amplitude: 4

Period: 6π

Phase Shift: $\frac{\pi}{6}$

8) Amplitude: 4

Period: π

Phase Shift: - 2

9) Amplitude: 3

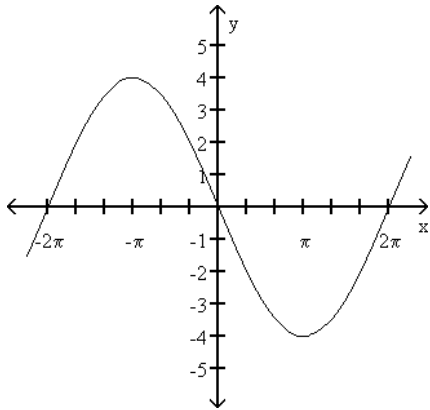
Period: 4π

Phase Shift: $-\frac{\pi}{4}$

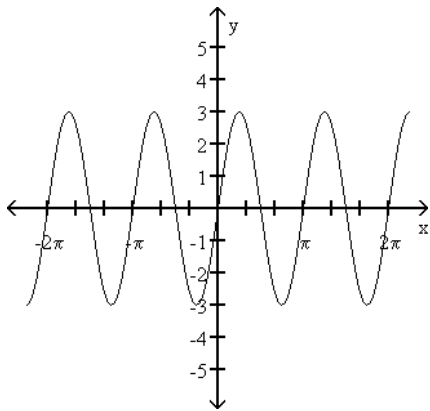
- 10) Amplitude: 2
 Period: π
 Phase Shift: $\frac{3}{2}$

Find an equation for the graph.

11)



12)



13)

