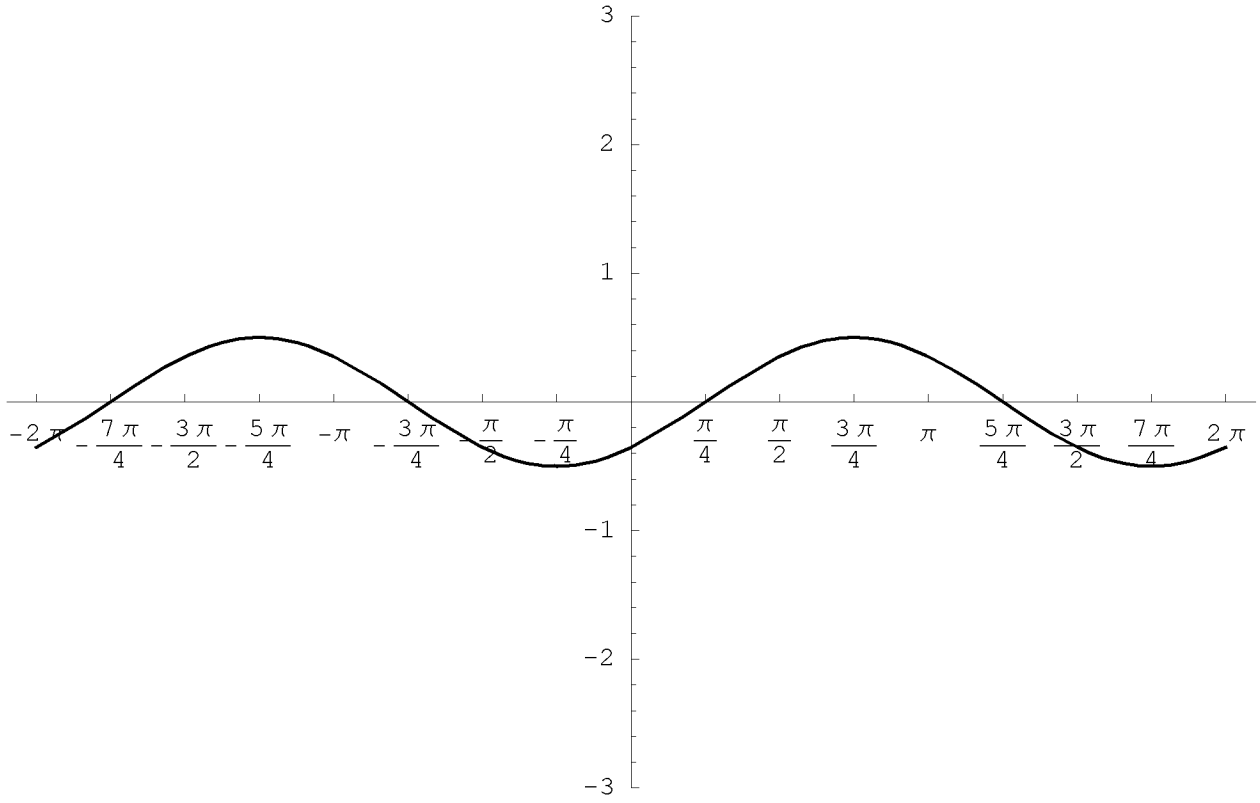
[07-04-23-T11]

Trig graphs

■ **A. View each of the following as based on the sine function. State the amplitude, frequency, period, and phase shift (including direction *left* or *right).* Then write the function.**

[0] EXAMPLE



amplitude: 0.5

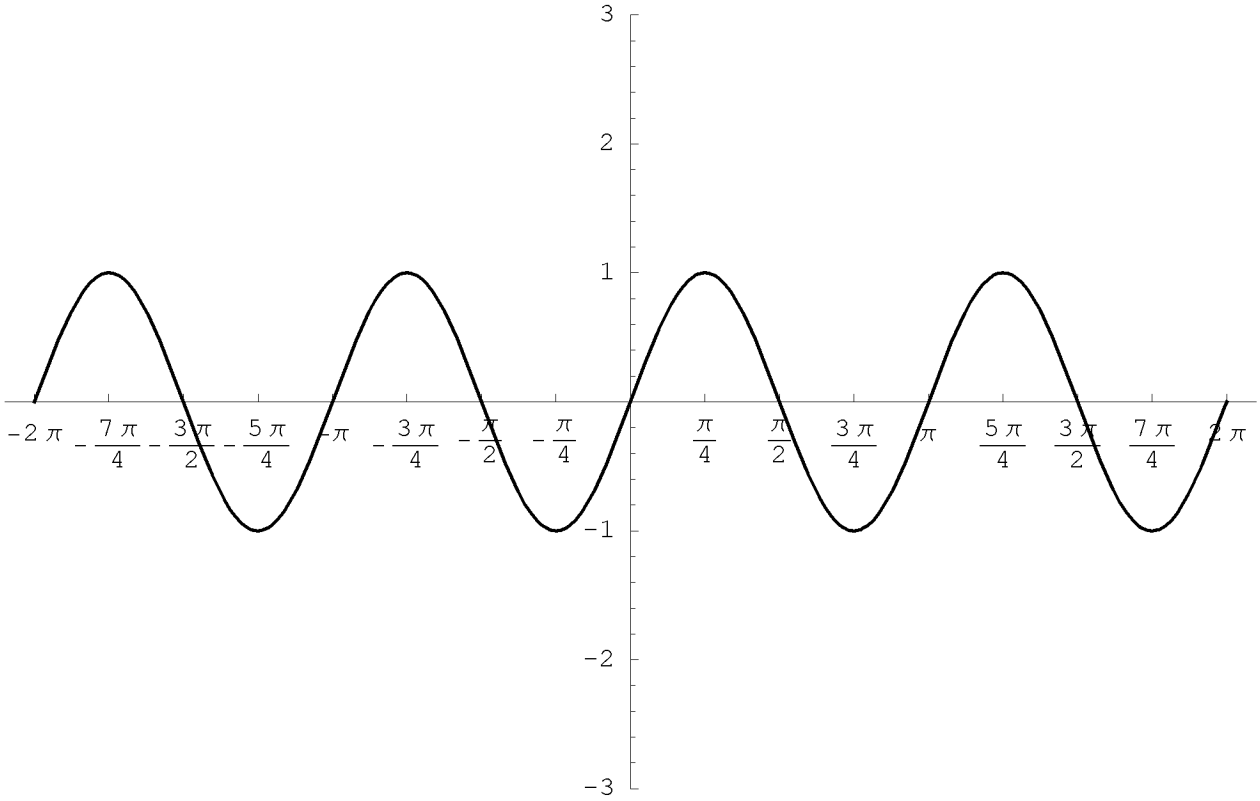
frequency: 1

period: 2π

phase shift: $\frac{\pi}{4}$

function: $y = .5 \sin (x - \frac{\pi}{4})$

[1]



amplitude:

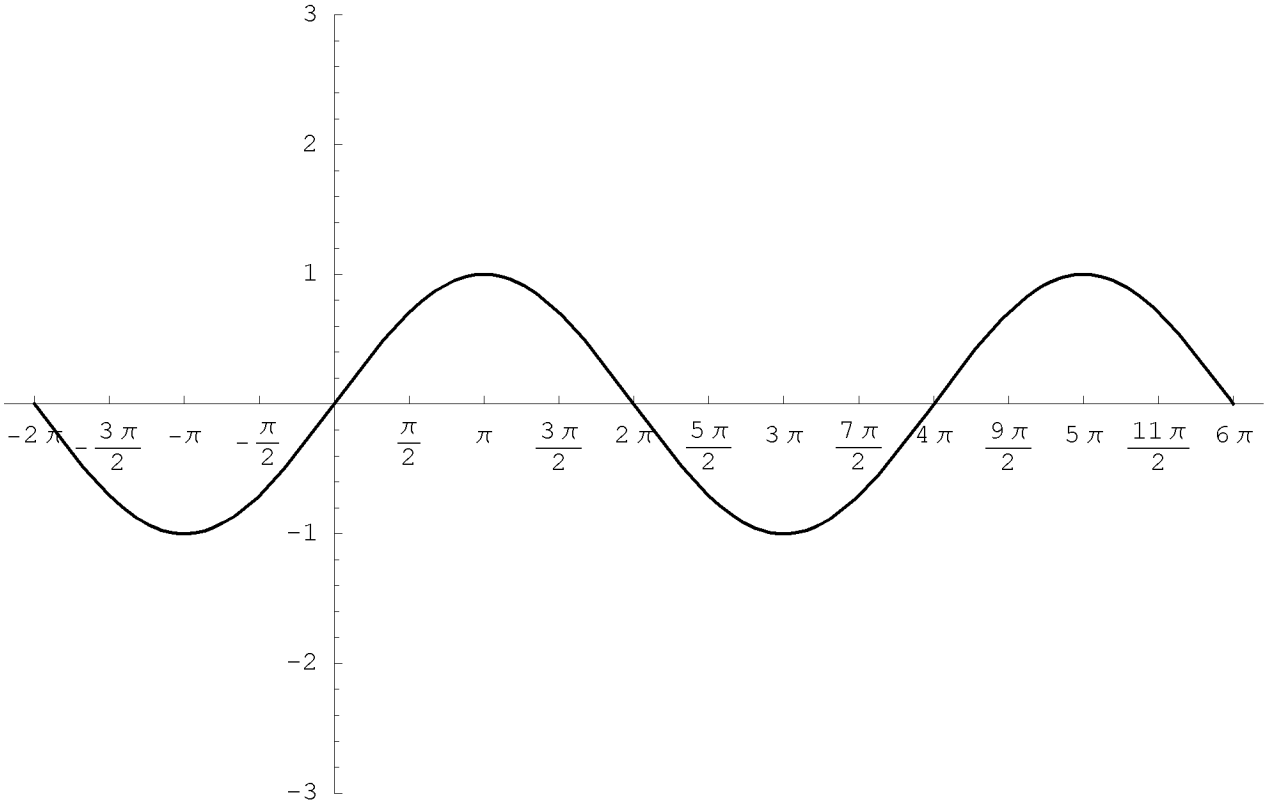
frequency:

period:

phase shift:

function:

[2]



amplitude:

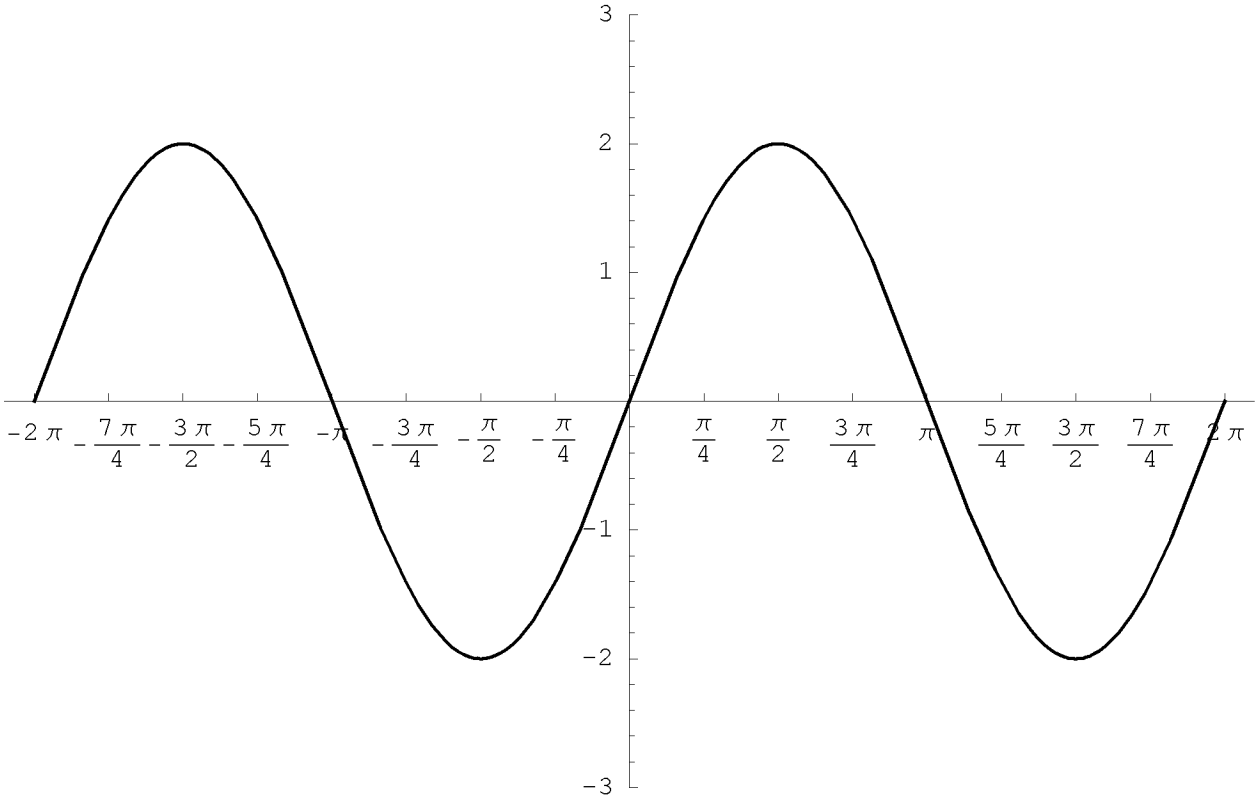
frequency:

period:

phase shift:

function:

[3]



amplitude:

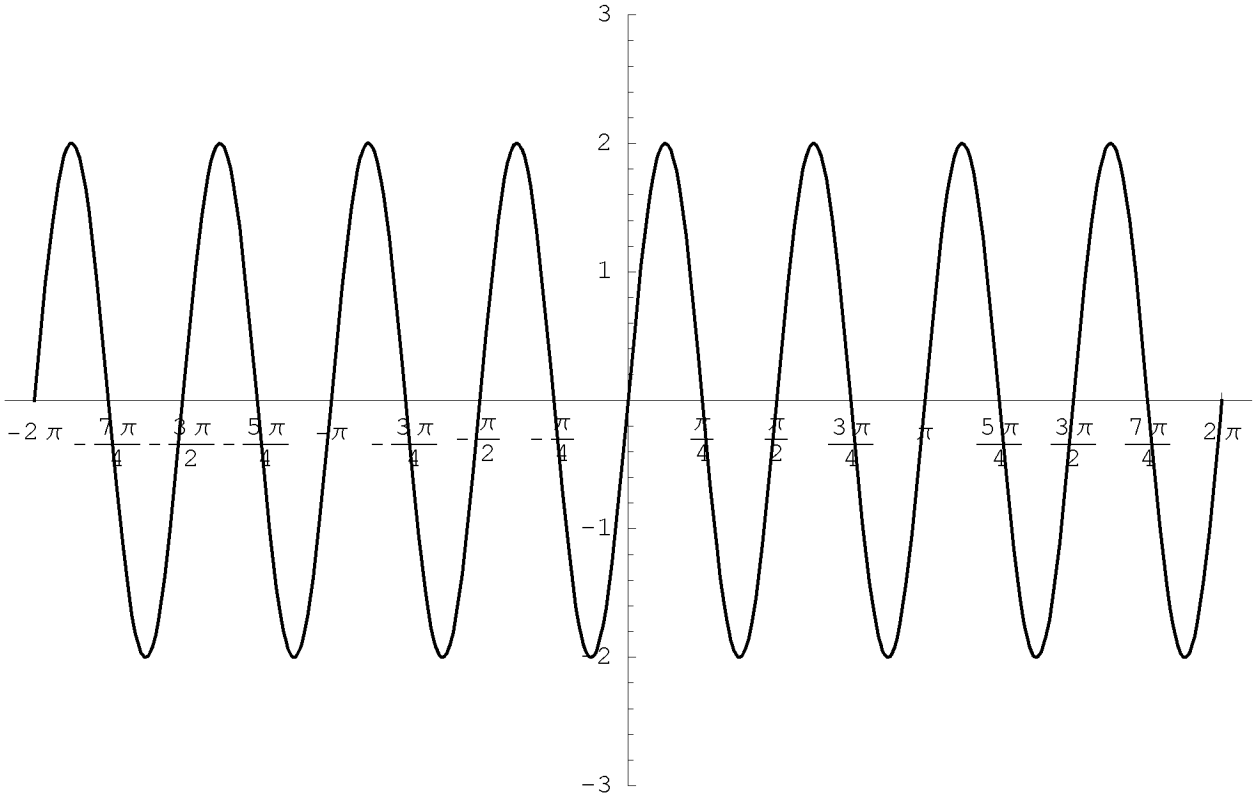
frequency:

period:

phase shift:

function:

[4]



amplitude:

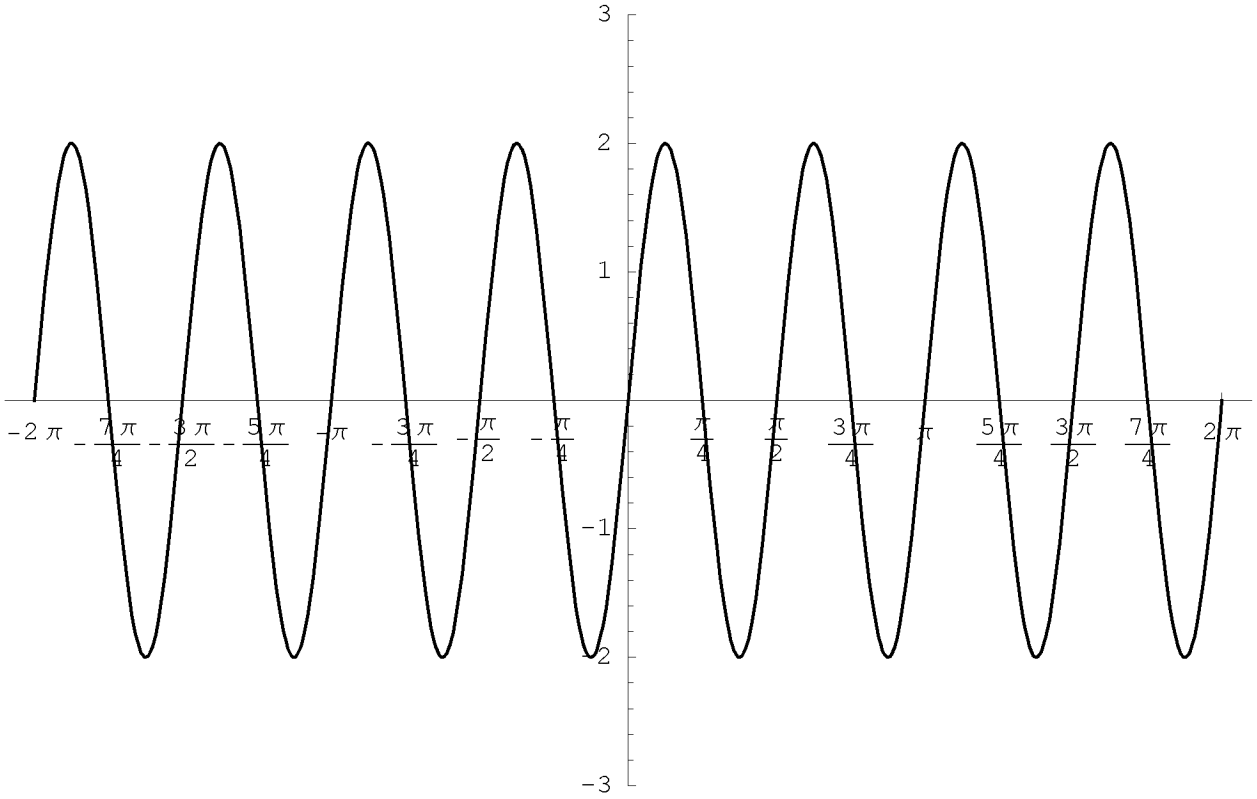
frequency:

period:

phase shift:

function:

[5]



amplitude:

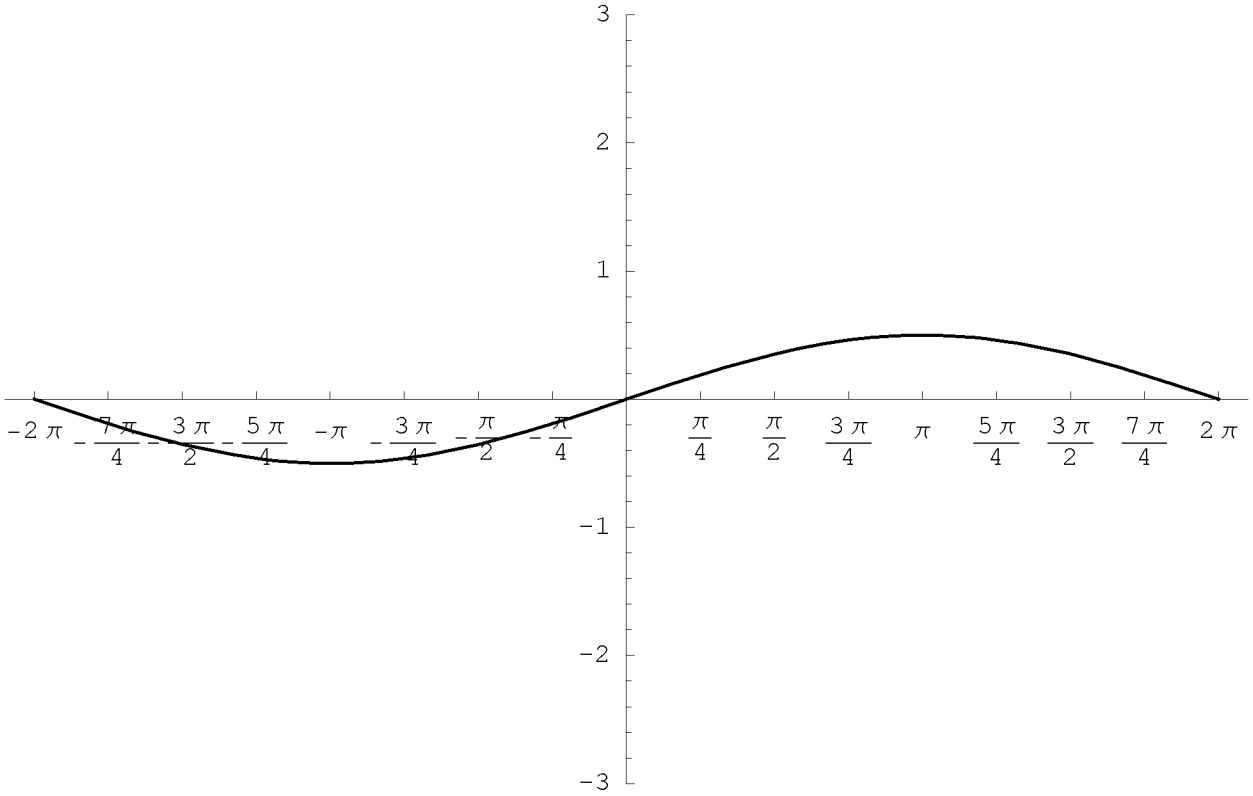
frequency:

period:

phase shift:

function:

[6]



amplitude:

frequency:

period:

phase shift:

function:

■ Answers

[1] Amplitude = 1, Frequency = 2, Shift = 0; $y = \sin(2x)$

[2] Amplitude = 1, Frequency = 1, Shift = $\frac{\pi}{4}$ right; $y = \sin(x - \frac{\pi}{4})$

[3] Amplitude = 1, Frequency = 1, Shift = 0; $y = 2\sin(x)$

[4] Amplitude = 2, Frequency = 4, Shift = 0; $y = 2\sin(4x)$

[5] Amplitude = 1.5, Frequency = 3, Shift = $\frac{\pi}{2}$ Left; $y = 1.5\sin 3\,(x + \frac{\pi}{2})$

[6] Amplitude = 0.5, Frequency = 0.5, Shift = 0; $y = .5\sin(.5x)$