

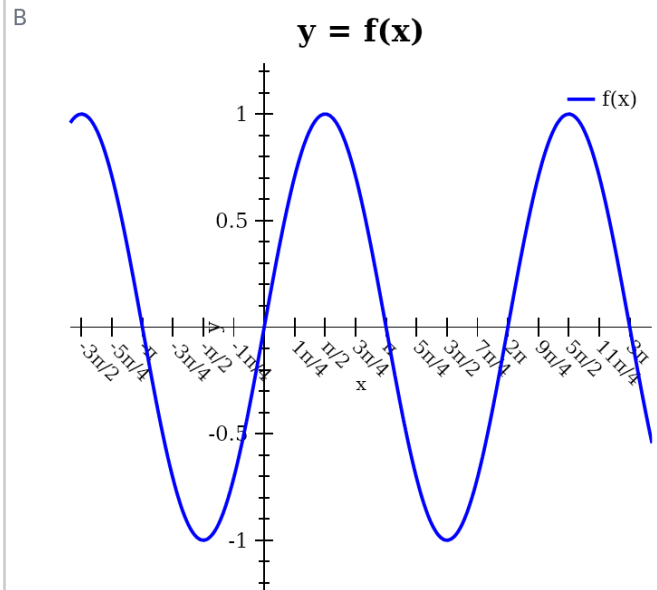
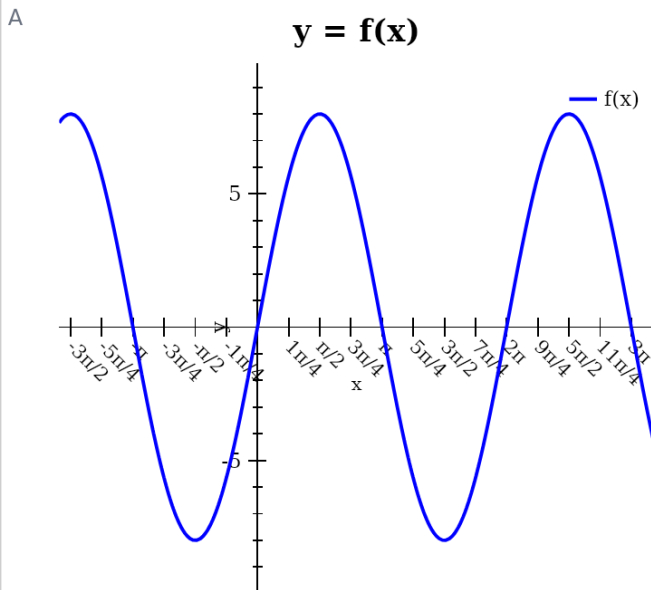


Determine amplitude, period, phase shift, and vertical displacement

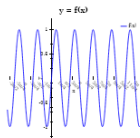
1

Which graph shows a sinusoidal function with this amplitude?

$$f(x) = 8 \cos(x)$$

**2**

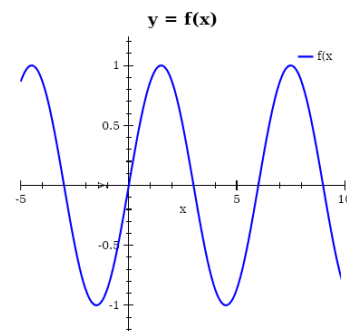
Which function would have a graph with this period?



- | | |
|---------------------|---------------------|
| A $f(x) = \sin(3x)$ | B $f(x) = \sin(x)$ |
| C $f(x) = \sin(6x)$ | D $f(x) = \sin(5x)$ |

3

Which function would have a graph with this phase shift?

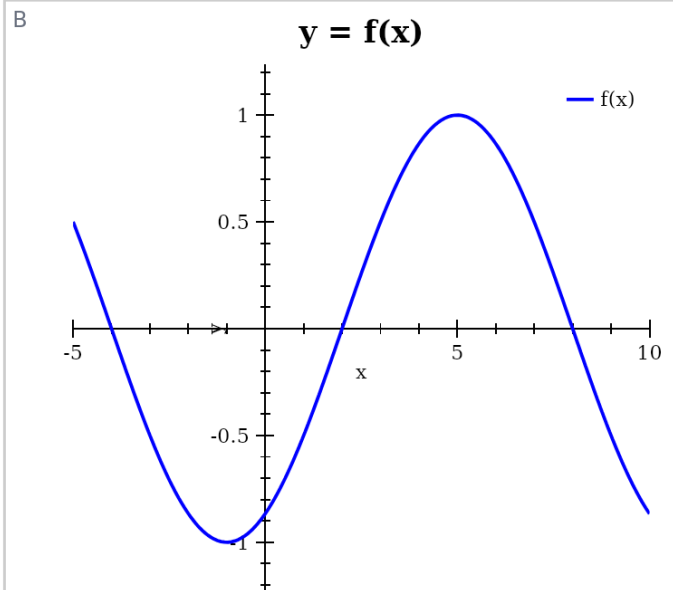
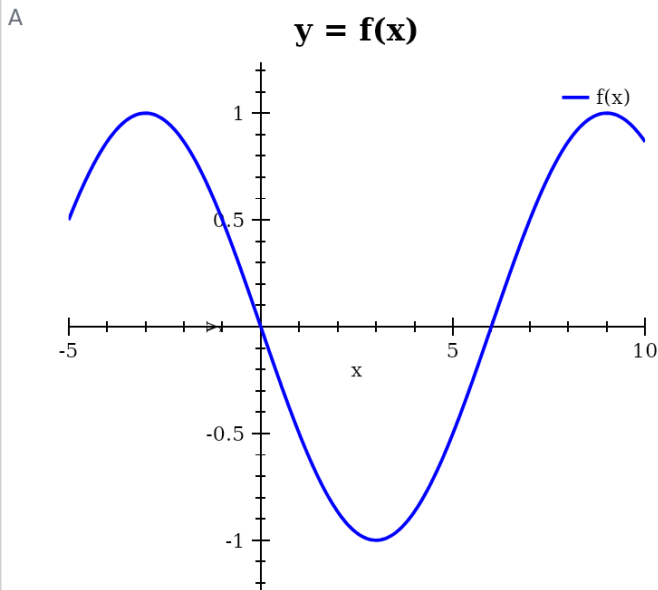


- | | |
|--|--|
| A $f(x) = \cos(\frac{1}{3}\pi x)$ | B $f(x) = \cos(\frac{1}{3}\pi x + 8\pi)$ |
| C $f(x) = \cos(\frac{1}{3}\pi x - \frac{6}{6}\pi)$ | D $f(x) = \cos(\frac{1}{3}\pi x - \frac{7}{6}\pi)$ |

**Determine amplitude, period, phase shift, and vertical displacement****4**

Which graph shows a sinusoidal function with this phase shift?

$$f(x) = \cos\left(\frac{1}{6}\pi x + 3\pi\right)$$

**5**

What are the period and vertical shift of this sinusoidal function?

$$f(x) = \sin(2x) + \frac{3}{2}$$

A

$$\text{Period} = \frac{2}{2}$$
$$\text{Vertical Shift} = \frac{3}{2}$$

B

$$\text{Period} = \frac{4\pi}{3}$$
$$\text{Vertical Shift} = 2$$

C

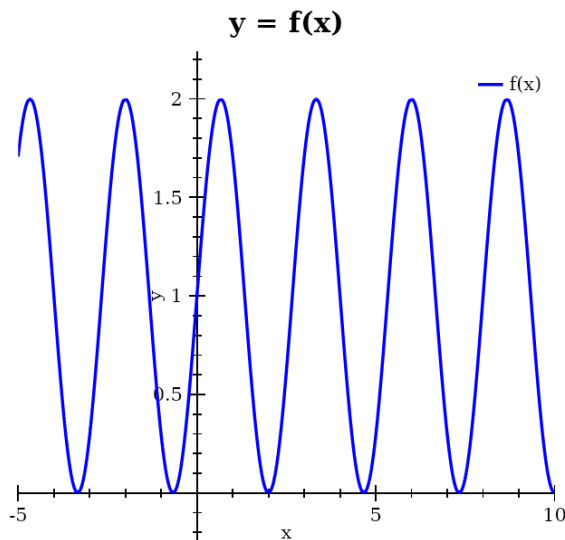
$$\text{Period} = \frac{2\pi}{2}$$
$$\text{Vertical Shift} = \frac{3}{2}$$

**Determine amplitude, period, phase shift, and vertical displacement****6**

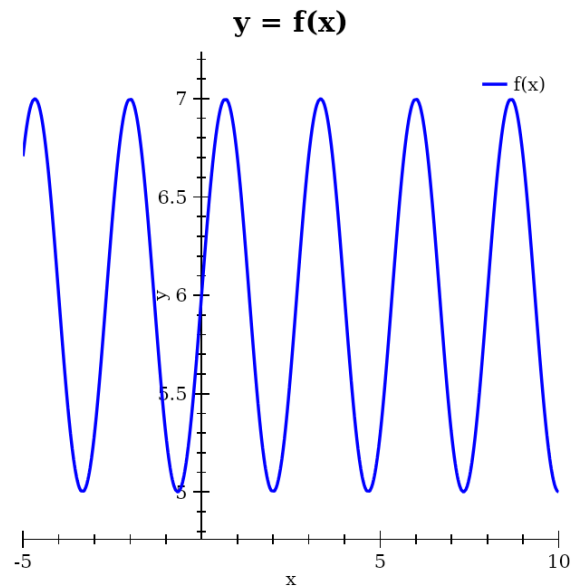
Which graph shows a sinusoidal function with this vertical shift?

$$f(x) = \cos\left(\frac{3}{4}\pi x + 4\pi\right) + 6$$

A



B

**7**

What are the period, amplitude, and vertical shift of this sinusoidal function?

$$f(x) = -\frac{3}{11}\sin(3x) + \frac{8}{5}$$

A

$$\begin{aligned}\text{Amplitude} &= 3 \\ \text{Period} &= \frac{22\pi}{3} \\ \text{Vertical Shift} &= \frac{8}{5}\end{aligned}$$

B

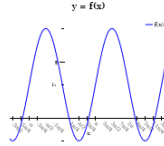
$$\begin{aligned}\text{Amplitude} &= \frac{3}{11} \\ \text{Period} &= \frac{2\pi}{3} \\ \text{Vertical Shift} &= \frac{8}{5}\end{aligned}$$



Determine amplitude, period, phase shift, and vertical displacement

8

Which function would have a graph with this vertical shift?



A $f(x) = 5 \cos(x + 7\pi) - 2$

B $f(x) = 5 \cos(x + 7\pi) + 3$

C $f(x) = 5 \cos(x + 7\pi) + 1$

D $f(x) = 5 \cos(x + 7\pi)$

9

What are the period, amplitude, vertical shift, and phase shift of this sinusoidal function?

$$f(x) = \frac{6}{11} \cos\left(\frac{3}{7}x + \frac{8}{3}\pi\right) + 3$$

A

Amplitude $= \frac{6}{11}$

Period $= \frac{6\pi}{8}$

Phase Shift $= \frac{3}{7}\pi$ left

Vertical Shift $= 3$

B

Amplitude $= \frac{6}{11}$

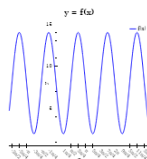
Period $= \frac{14\pi}{3}$

Phase Shift $= \frac{8}{3}\pi$ left

Vertical Shift $= 3$

10

Which function would have a graph with this vertical shift?



A $f(x) = -6 \cos(2x + 4\pi) + 8$

B $f(x) = -6 \cos(2x + 4\pi) + 1$

C $f(x) = -6 \cos(2x + 4\pi) + 4$

D $f(x) = -6 \cos(2x + 4\pi) - 2$