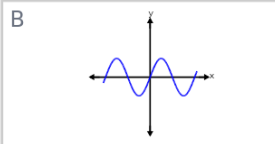
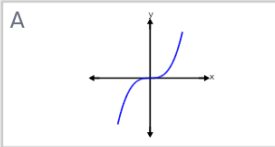




Graph sine functions

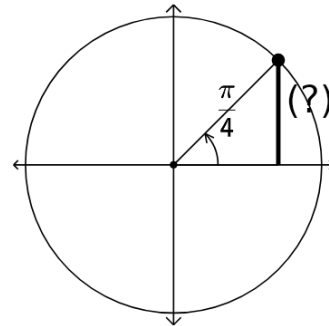
1

Trigonometric



2

What is the Y dimension for the unit circle point at $\pi/4$ radians?



A

$$\frac{\sqrt{2}}{2}$$

B

$$\frac{\sqrt{3}}{2}$$

3

Which sinusoidal function has these parameters?

$$\begin{aligned}\text{Phase Shift} &= \frac{3}{11}\pi \text{ left} \\ \text{Vertical Shift} &= \frac{7}{5}\end{aligned}$$

A

$$f(x) = \sin\left(x + \frac{3}{11}\right) + \frac{7}{5}$$

B

$$f(x) = \sin\left(x + \frac{3}{11}\pi\right) + \frac{7}{5}$$

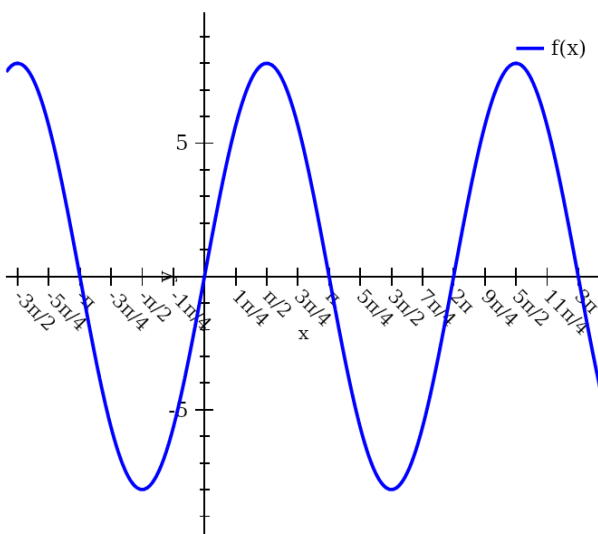
4

Which graph shows a sinusoidal function with this amplitude?

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

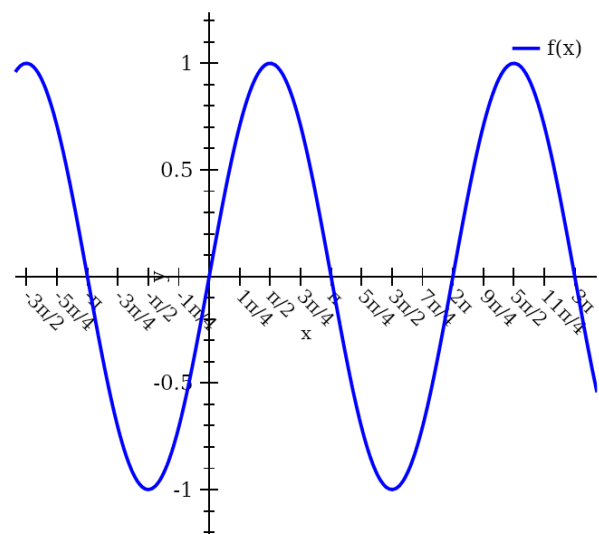
A

$y = f(x)$



B

$y = f(x)$





Graph sine functions

5

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

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

A

$$\begin{aligned}\text{Period} &= \frac{6\pi}{2} \\ \text{Phase Shift} &= 2 \text{ left}\end{aligned}$$

B

$$\begin{aligned}\text{Period} &= \frac{6\pi}{2} \\ \text{Phase Shift} &= 2\pi \text{ left}\end{aligned}$$

C

$$\begin{aligned}\text{Period} &= \frac{2\pi}{2} \\ \text{Phase Shift} &= \frac{2}{3} \text{ left}\end{aligned}$$

D

$$\begin{aligned}\text{Period} &= \frac{6\pi}{2} \\ \text{Phase Shift} &= 2 \text{ right}\end{aligned}$$

6

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

$$f(x) = -\frac{5}{2}\cos\left(\frac{7}{5}x + \frac{2}{5}\right)$$

A

$$\begin{aligned}\text{Amplitude} &= \frac{5}{2} \\ \text{Period} &= \frac{10\pi}{7} \\ \text{Phase Shift} &= \frac{2}{5} \text{ right}\end{aligned}$$

B

$$\begin{aligned}\text{Amplitude} &= \frac{5}{2} \\ \text{Period} &= \frac{10\pi}{7} \\ \text{Phase Shift} &= \frac{2}{5} \text{ left}\end{aligned}$$



Graph sine functions

7

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

$$f(x) = \frac{3}{11} \cos\left(\frac{8}{5}\pi x + \frac{3}{2}\right) + \frac{2}{11}$$

A

$$\text{Amplitude} = \frac{3}{11}$$

$$\text{Period} = \frac{10}{8}$$

$$\text{Phase Shift} = \frac{3}{2} \text{ left}$$

$$\text{Vertical Shift} = \frac{2}{11}$$

B

$$\text{Amplitude} = \frac{8}{5}$$

$$\text{Period} = \frac{22}{3}$$

$$\text{Phase Shift} = \frac{3}{2} \text{ left}$$

$$\text{Vertical Shift} = \frac{2}{11}$$

8

Which sinusoidal function has these parameters?

$$\begin{aligned} \text{Amplitude} &= 1 \\ \text{Period} &= \frac{10\pi}{6} \\ \text{Phase Shift} &= \frac{2}{7} \pi \\ \text{Vertical Shift} &= \frac{1}{2} \end{aligned}$$

A

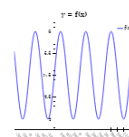
$$f(x) = -1 \cos\left(\frac{6}{5}x + \frac{3}{2}\right) + \frac{2}{7}$$

B

$$f(x) = -1 \cos\left(\frac{6}{5}x + \frac{2}{7}\right) + \frac{3}{2}$$

9

Which function would have a graph with this period?



A

$$f(x) = \cos(6x) + 5$$

B

$$f(x) = \cos(4x) + 5$$

C

$$f(x) = \cos(2x) + 5$$

D

$$f(x) = \cos(5x) + 5$$

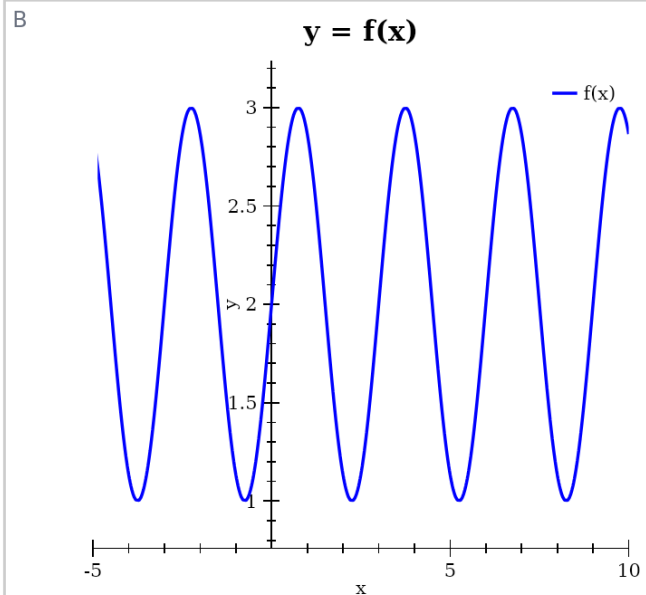
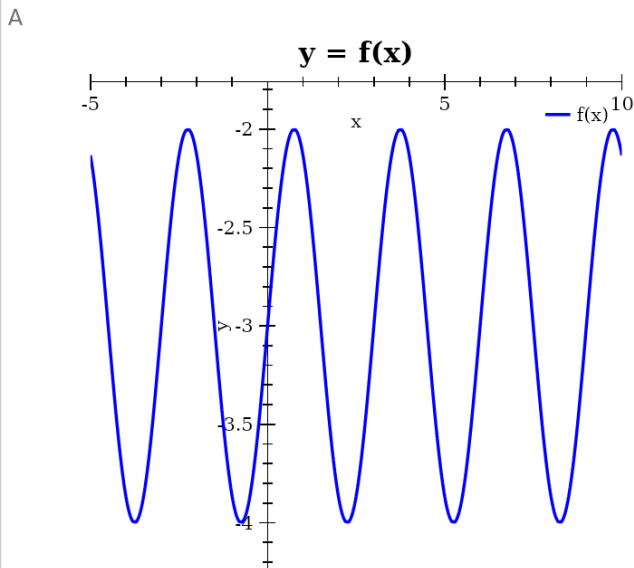


Graph sine functions

10

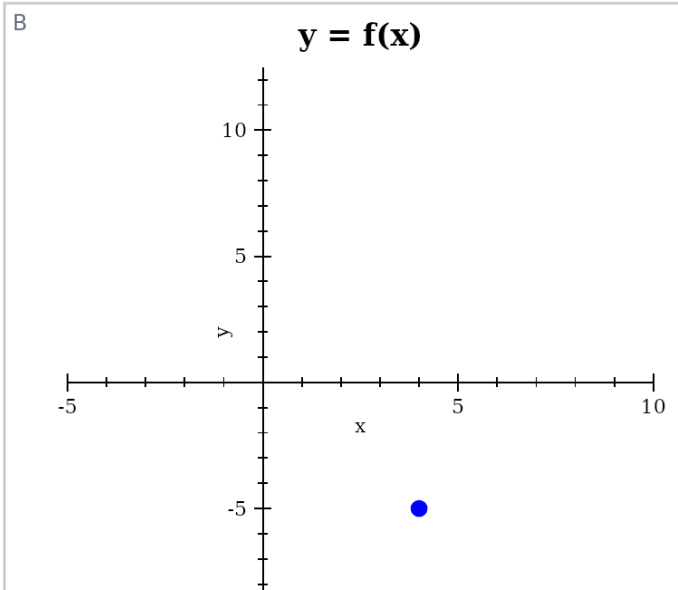
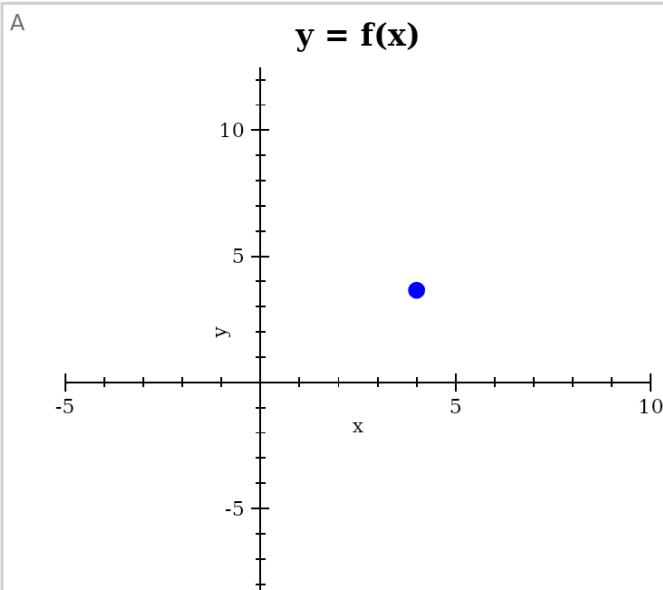
Which graph shows a sinusoidal function with this vertical shift?

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

**11**

Which graph shows the value of this function at $x = 4$?

$$f(x) = -7\cos\left(\frac{1}{2}\pi x\right) + 2$$



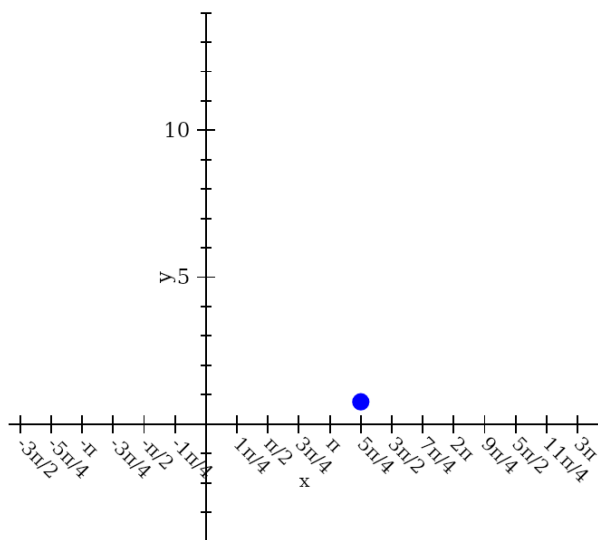
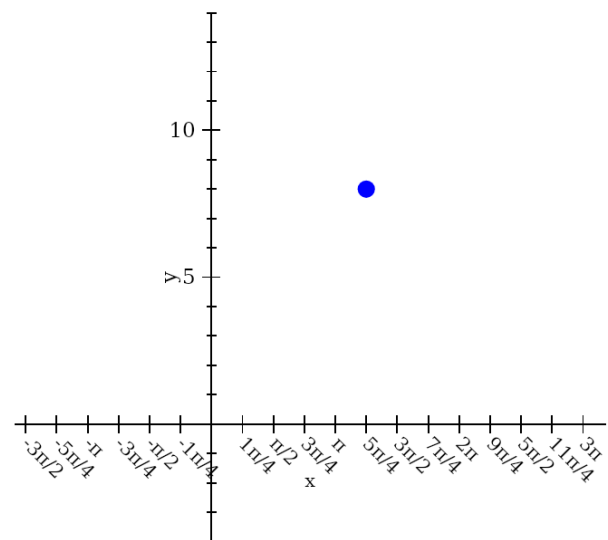


Graph sine functions

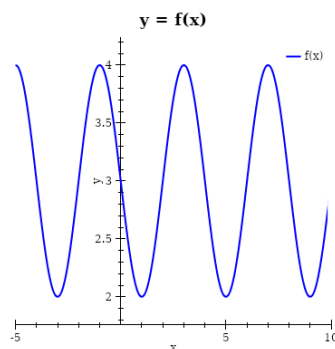
12

Which graph shows the value of this function at $x = 5\pi/4$?

$$f(x) = 6 \cos(3x + 7\pi) + 5$$

A $y = f(x)$ **B** $y = f(x)$ **13**

Which function would have a graph with this vertical shift?

**A**

$$f(x) = \cos\left(\frac{1}{2}\pi x + 5\pi\right) - 2$$

B

$$f(x) = \cos\left(\frac{1}{2}\pi x + 5\pi\right)$$

C

$$f(x) = \cos\left(\frac{1}{2}\pi x + 5\pi\right) + 1$$

D

$$f(x) = \cos\left(\frac{1}{2}\pi x + 5\pi\right) + 3$$

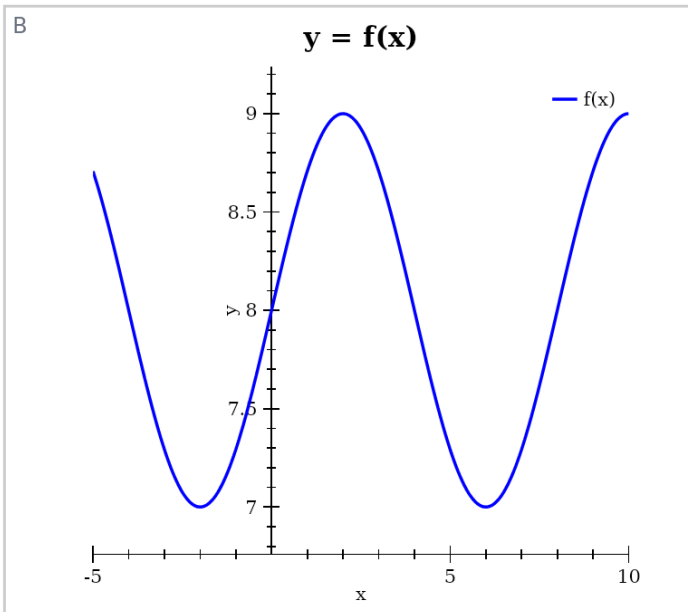
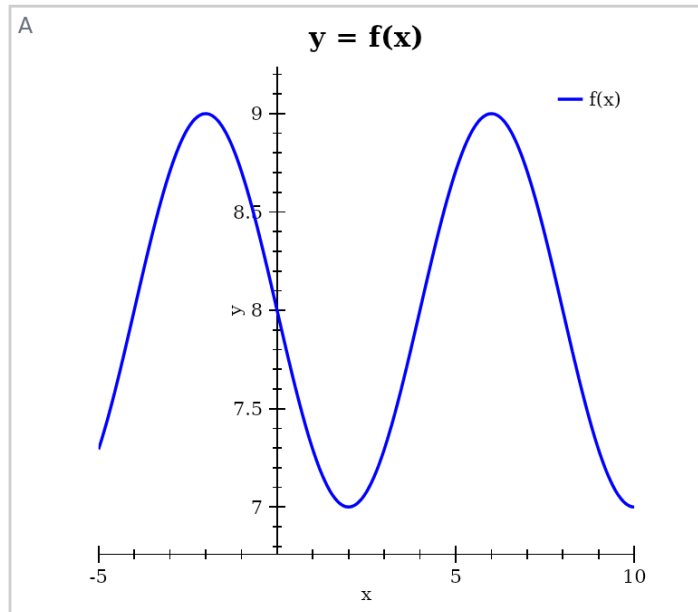


Graph sine functions

14

Which graph shows a sinusoidal function with this phase shift?

$$f(x) = \sin\left(\frac{1}{4}\pi x + 2\pi\right) + 8$$

**15**

Which graph shows a sinusoidal function with this phase shift?

$$f(x) = -7\cos(2x + 8\pi) + 7$$

