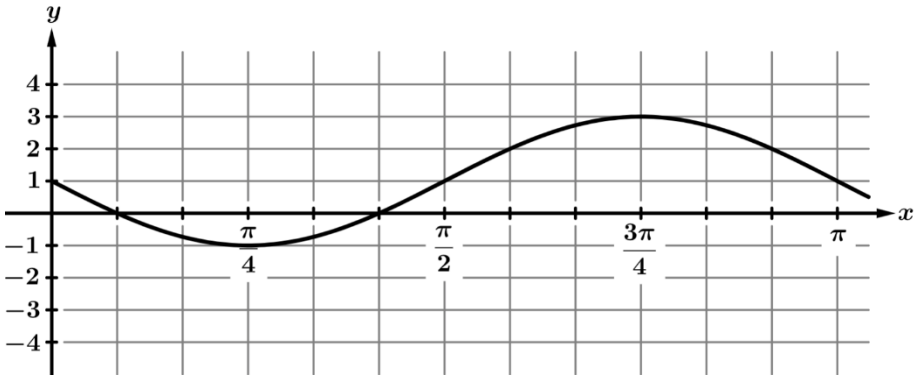
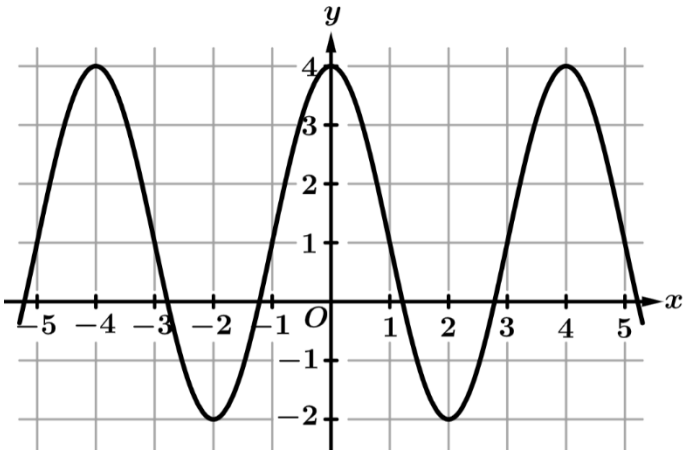


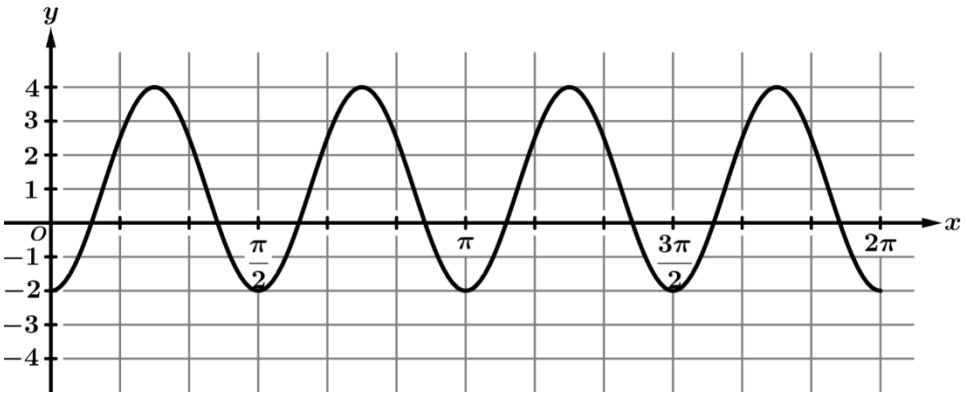
Graph of *h*

1. The graph of the sinusoidal function h is shown in the figure above. The function h can be written as $h(\theta) = a\sin(b\theta) + d$. Find the values of the constants a, b, and d.



Graph of *f*

2. The graph of the sinusoidal function f is shown in the figure above. The function f can be written as $f(\theta) = a\cos(b\theta) + d$. Find the values of the constants a, b, and d.



Graph of h

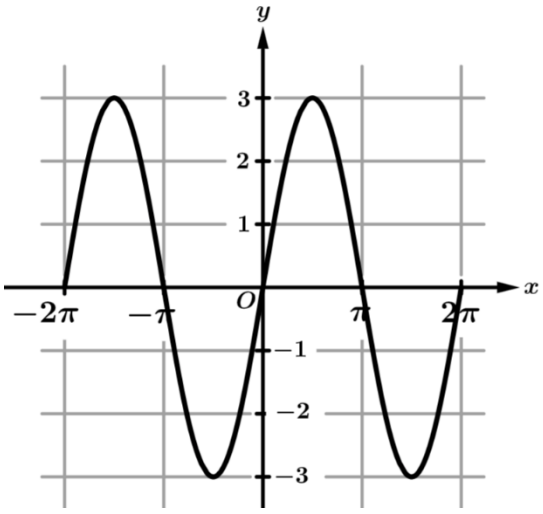
3. The figure shows the graph of a sinusoidal function h. What are the values of the period and amplitude of h?

(A) The period is π, and the amplitude is 3.

(B) The period is π, and the amplitude is 6.

(C) The period is $\frac{\pi}{2}$, and the amplitude is 3.

(D) The period is $\frac{\pi}{2}$, and the amplitude is 6.



Graph of h

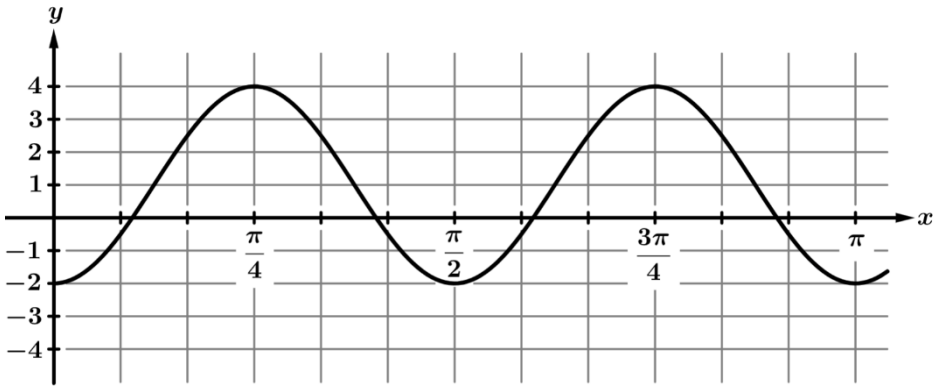
4. The figure shows the graph of a sinusoidal function h. What are the values of the period and amplitude of h?

(A) The period is π, and the amplitude is 3.

(B) The period is π, and the amplitude is 6.

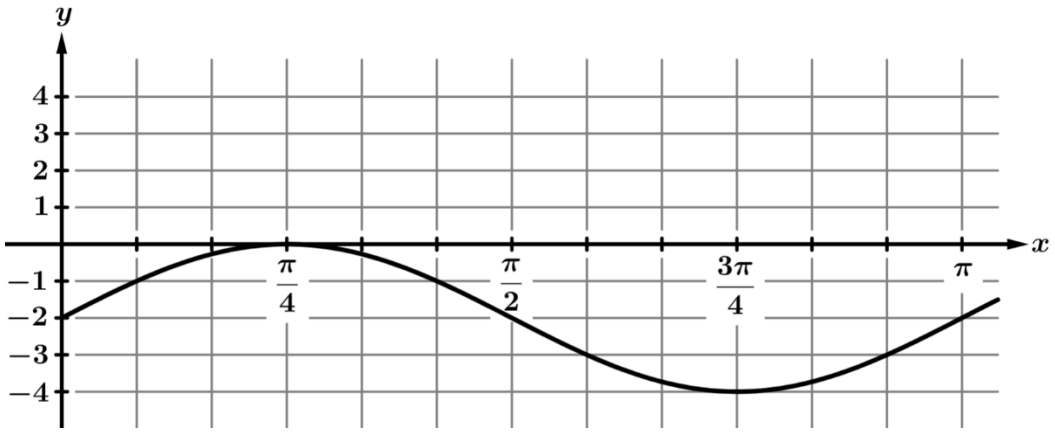
(C) The period is 2π, and the amplitude is 3.

(D) The period is 2π, and the amplitude is 6.



Graph of f

5. The figure shows the graph of a sinusoidal function f. Write an equation for f.

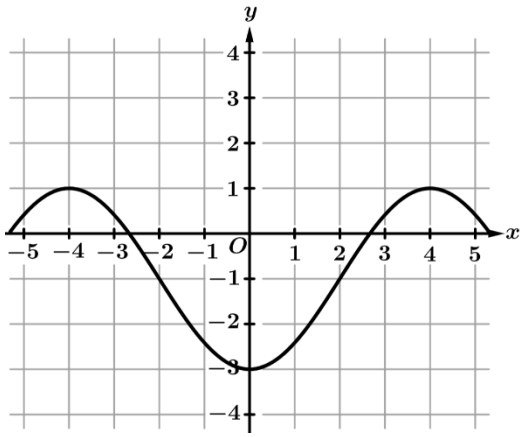


Graph of g

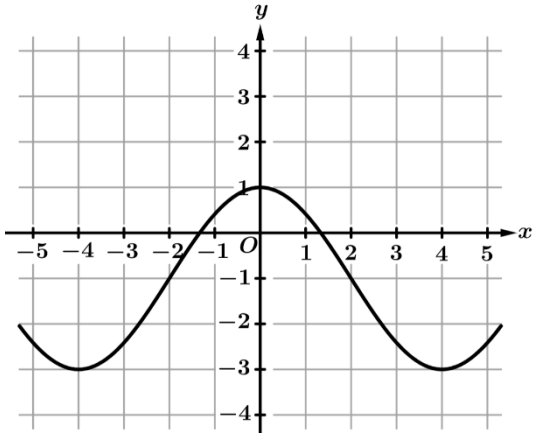
6. The figure shows the graph of a sinusoidal function g. Write an equation for g.

7. The function f is given by $f(x) = -2\cos\left(\frac{\pi}{4}x\right) - 1$. Which of the following could be the graph of $f(x)$?

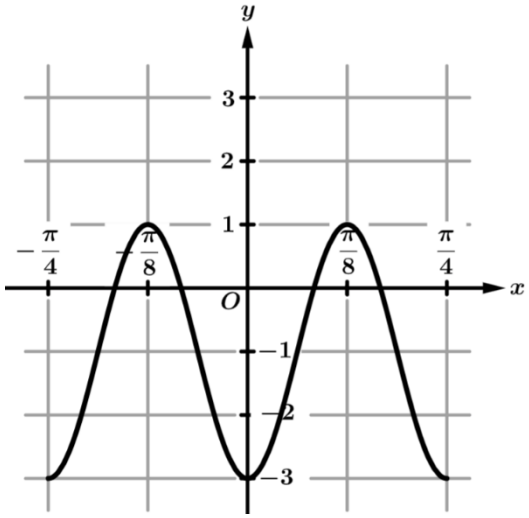
(A)



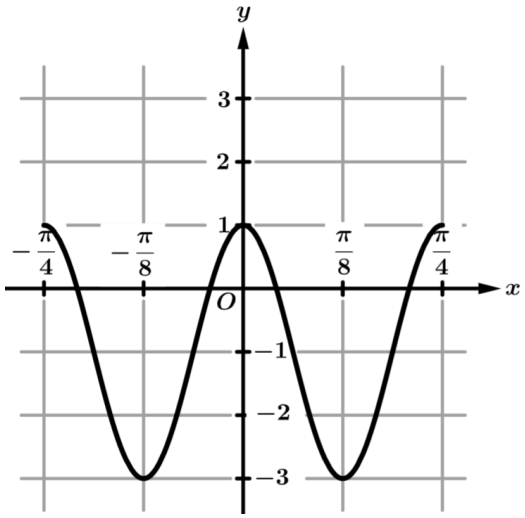
(B)

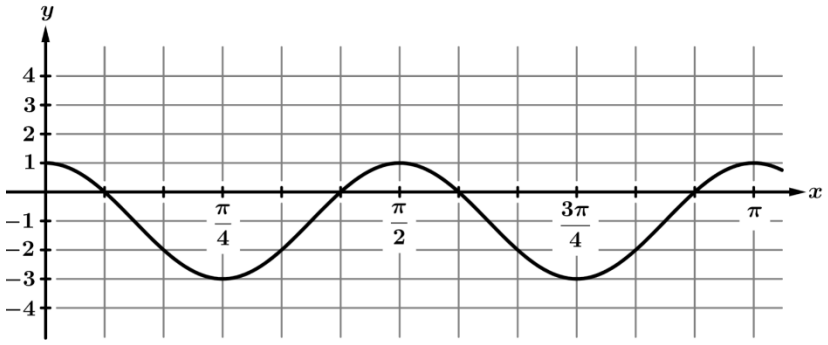


(C)



(D)

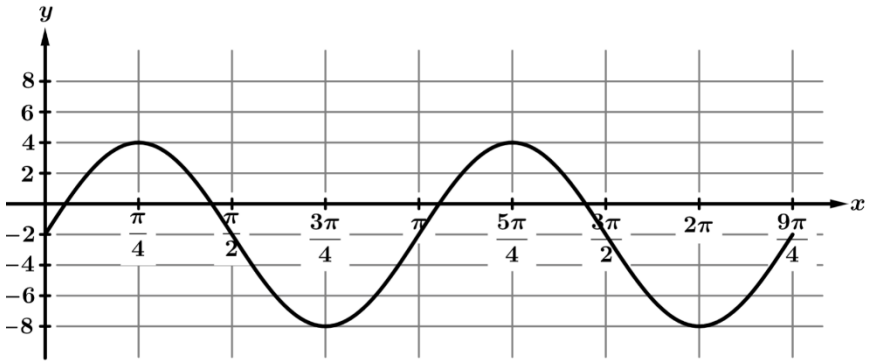




Graph of g

8. The figure shows the graph of a trigonometric function g. Which of the following could be an expression for $g(x)$

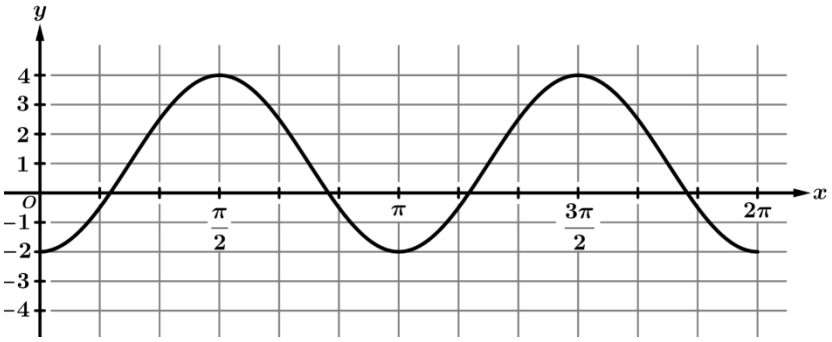
(A) $2\sin(4x) - 1$ (B) $2\sin\left(4\left(x - \frac{\pi}{2}\right)\right) - 1$ (C) $2\cos\left(4\left(x - \frac{\pi}{4}\right)\right) - 1$ (D) $-2\cos\left(4\left(x - \frac{3\pi}{4}\right)\right) - 1$



Graph of f

9. The figure shows the graph of a trigonometric function f. Which of the following could be an expression for $f(x)$

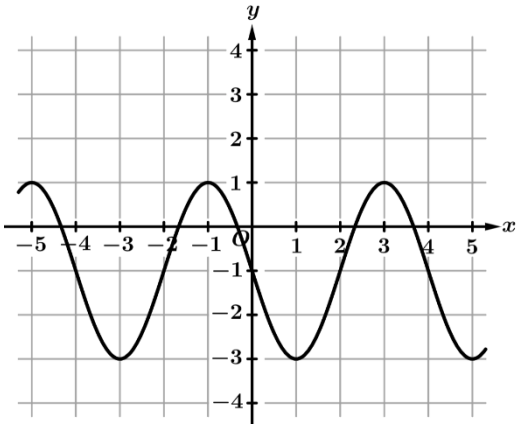
(A) $6\sin(2x)+2$ (B) $6\sin\left(2\left(x-\frac{\pi}{2}\right)\right)-2$ (C) $-6\sin\left(2\left(x-\frac{3\pi}{2}\right)\right)-2$ (D) $-6\sin\left(2(x-2\pi)\right)-2$



Graph of h

10. The figure shows the graph of a trigonometric function h. Which of the following could be an expression for $h(x)$

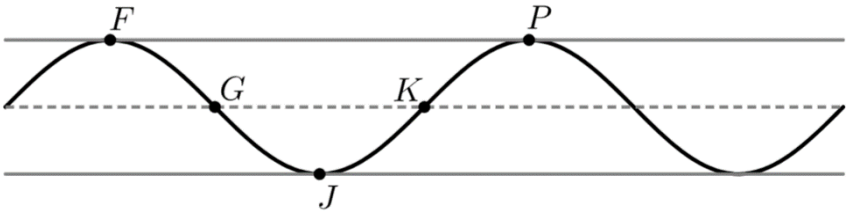
(A) $-3\cos(2x)-2$ (B) $3\cos\left(2\left(x-\frac{\pi}{2}\right)\right)+1$ (C) $3\sin\left(2\left(x-\frac{\pi}{2}\right)\right)+1$ (D) $-3\sin\left(2(x-\pi)\right)+1$



Graph of k

11. The figure shows the graph of a trigonometric function k. Which of the following could be an expression for $k(x)$

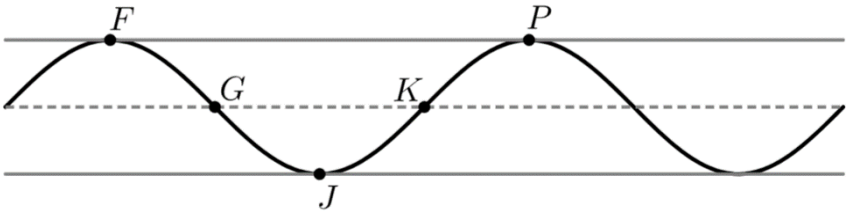
(A) $2\sin\left(\frac{\pi}{2}x\right)-1$ (B) $-2\sin\left(\frac{1}{4}x\right)-1$ (C) $2\sin\left(\frac{\pi}{2}(x-2)\right)-1$ (D) $-2\cos\left(\frac{\pi}{2}(x+1)\right)-1$



12. The graph of h and its dashed midline for two full cycles is shown. Five points, $F, G, J, K,$ and P are labeled on the graph. No scale is indicated, and no axes are presented.

The coordinates for the five points: $F, G, J, K,$ and P are: $F(0,12)$, $G(5,9)$, $J(10,6)$, $K(15,9)$, $P(20,12)$.

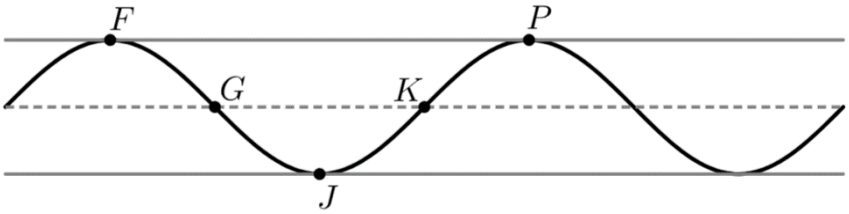
The function h can be written in the form $h(t) = a\sin(b(t+c)) + d$. Find values of constants $a, b, c,$ and d.



13. The graph of h and its dashed midline for two full cycles is shown. Five points, $F, G, J, K,$ and P are labeled on the graph. No scale is indicated, and no axes are presented.

The coordinates of $F, G, J, K,$ and P are: $F\left(\frac{\pi}{2}, 6\right)$, $G\left(\frac{3\pi}{4}, -1\right)$, $J(\pi, -8)$, $K\left(\frac{5\pi}{4}, -1\right)$, $P\left(\frac{3\pi}{2}, 6\right)$.

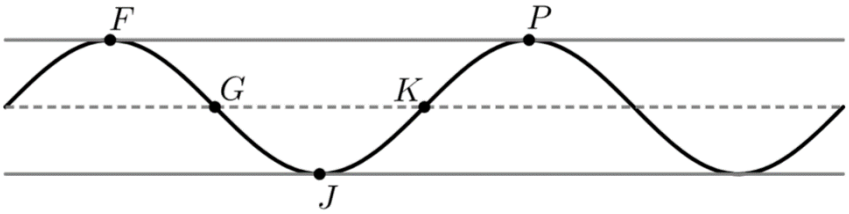
The function h can be written in the form $h(t) = a\sin(b(t+c)) + d$. Find values of constants $a, b, c,$ and d.



14. The graph of h and its dashed midline for two full cycles is shown. Five points, $F, G, J, K,$ and P are labeled on the graph. No scale is indicated, and no axes are presented.

The coordinates for the points $F, G, J, K,$ and P are $F(\pi, 40)$, $G(2\pi, 30)$, $J(3\pi, 20)$, $K(4\pi, 30)$, $P(5\pi, 40)$.

The function h can be written in the form $h(t) = a\cos(b(t+c)) + d$. Find values of constants $a, b, c,$ and d.



15. The graph of h and its dashed midline for two full cycles is shown. Five points, $F, G, J, K,$ and P are labeled on the graph. No scale is indicated, and no axes are presented.

The coordinates of $F, G, J, K,$ and P are $F(0,12)$, $G\left(\frac{1}{100}, 7\right)$, $J\left(\frac{1}{50}, 2\right)$, $K\left(\frac{3}{100}, 7\right)$, $P\left(\frac{1}{25}, 12\right)$.

The function h can be written in the form $h(t) = a\cos(b(t+c)) + d$. Find values of constants $a, b, c,$ and d.