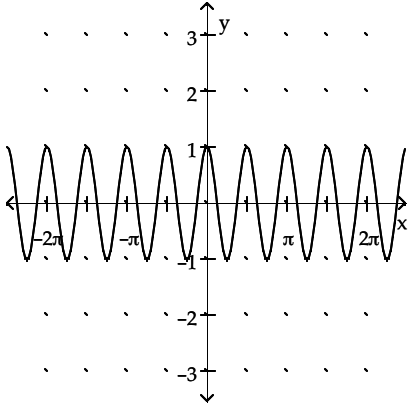


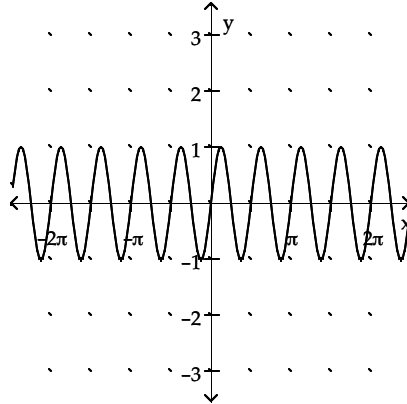
**Match the function with its graph.**

- 1)  $y = \sin 4x$       2)  $y = 4 \cos x$   
 3)  $y = 4 \sin x$       4)  $y = \cos 4x$

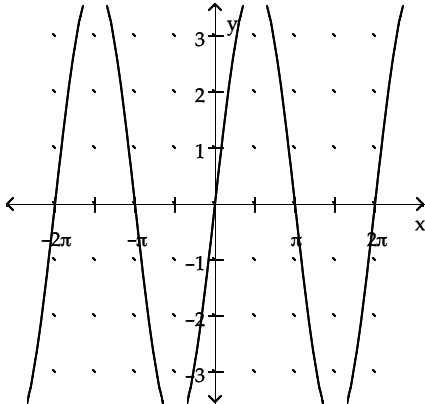
A)



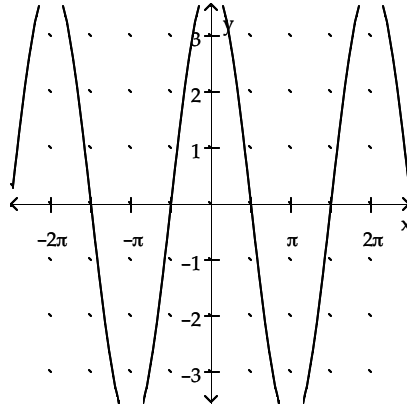
B)



C)



D)



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

- 2) Amplitude: 4  
 Period:  $3\pi$

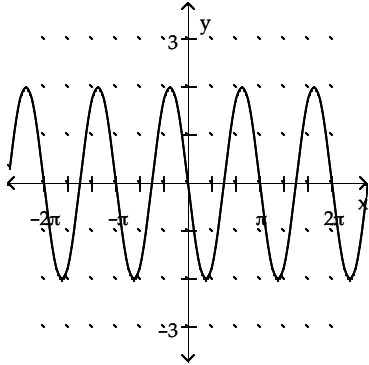
**Solve.**

- 3) The current  $I$ , in amperes, flowing through a particular ac (alternating current) circuit at time  $t$  seconds is  
 $I = 240 \sin(70\pi t)$   
 What is the period and amplitude of the current?
- 4) For what numbers  $x$ ,  $0 \leq x \leq 2\pi$ , does  $\cos x = 1$ ?
- 5) For what numbers  $x$ ,  $0 \leq x \leq 2\pi$ , does  $\sin x = -1$ ?

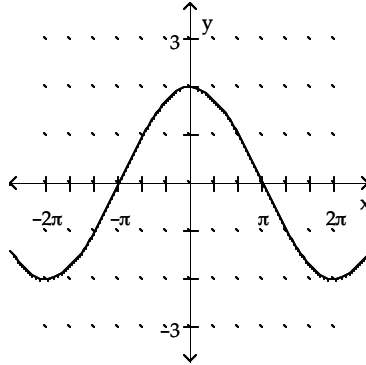
Match the function with its graph.

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

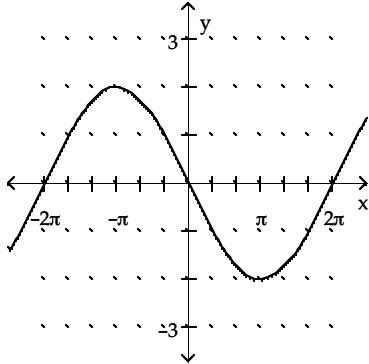
A)



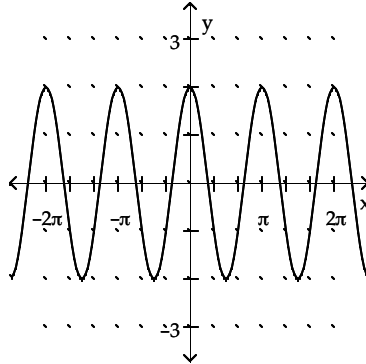
B)



C)

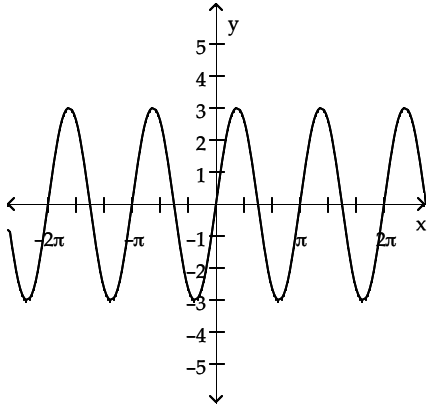


D)



Find an equation for the graph.

7)



Solve.

- 8) For what numbers  $x$ ,  $0 \leq x \leq 2\pi$ , does  $\sin x = 0$ ?

## Answer Key

Testname: SECTION5-4.TST

1) 1B, 2D, 3C, 4A

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

3)  $\frac{1}{35}$  second, amplitude = 240

4)  $0, 2\pi$

5)  $\frac{3\pi}{2}$

6) 1A, 2C, 3D, 4B

7)  $y = 3 \sin(2x)$

8)  $0, \pi, 2\pi$