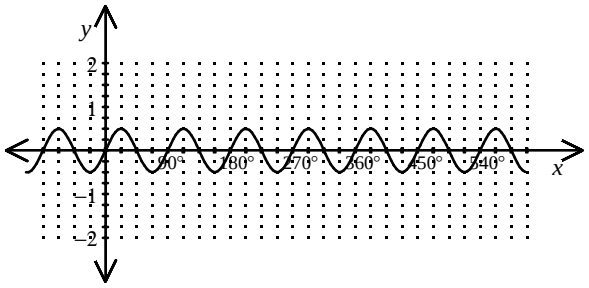
Find the amplitude, the period, and the frequency of the graph. Then write an equation for the sine function for the graph.

1.



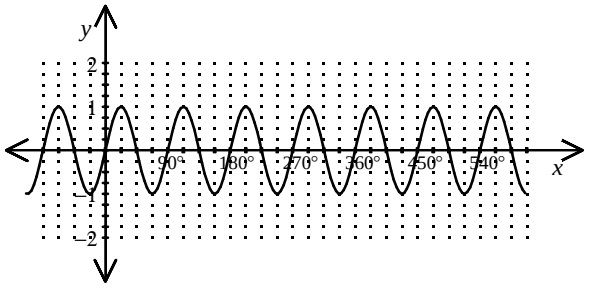
[A] $1,\ 90°,\ \frac{1}{4},\ y = \sin\frac{1}{4}x$

[B] $1,\ 45°,\ 4,\ y = \sin 4x$

[C] $\frac{1}{2},\ 90°,\ 4,\ y = \frac{1}{2}\sin 4x$

[D] $\frac{1}{2},\ 45°,\ \frac{1}{4},\ y = \frac{1}{2}\sin\frac{1}{4}x$

2.



[A] $1,\ 90°,\ 4,\ y = \sin 4x$

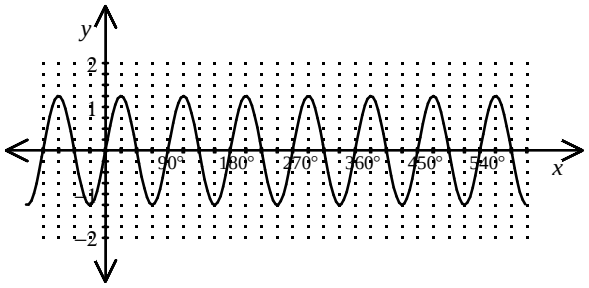
[B] $2,\ 90°,\ \frac{1}{4},\ y = 2\sin\frac{1}{4}x$

[C] $1,\ 45°,\ \frac{1}{4},\ y = \sin\frac{1}{4}x$

[D] $2,\ 45°,\ 4,\ y = 2\sin 4x$

Find the amplitude, the period, and the frequency of the graph. Then write an equation for the sine function for the graph.

3.



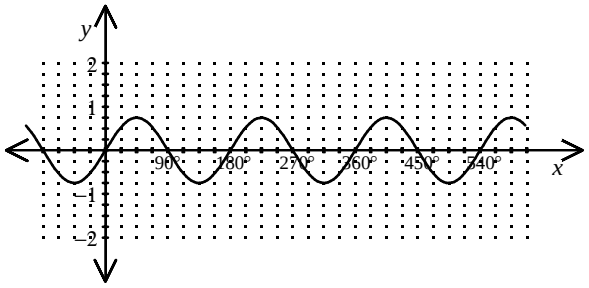
[A] $\frac{5}{2},\ 45°,\ 4,\ y=\frac{5}{2}\sin 4x$

[B] $\frac{5}{4},\ 45°,\ \frac{1}{4},\ y=\frac{5}{4}\sin\frac{1}{4}x$

[C] $\frac{5}{2},\ 90°,\ \frac{1}{4},\ y=\frac{5}{2}\sin\frac{1}{4}x$

[D] $\frac{5}{4},\ 90°,\ 4,\ y=\frac{5}{4}\sin 4x$

4.



[A] $\frac{3}{2},\ 90°,\ 2,\ y=\frac{3}{2}\sin 2x$

[B] $\frac{3}{4},\ 90°,\ \frac{1}{2},\ y=\frac{3}{4}\sin\frac{1}{2}x$

[C] $\frac{3}{4},\ 180°,\ 2,\ y=\frac{3}{4}\sin 2x$

[D] $\frac{3}{2},\ 180°,\ \frac{1}{2},\ y=\frac{3}{2}\sin\frac{1}{2}x$

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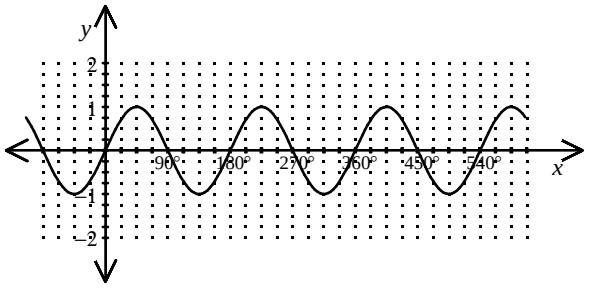
5.



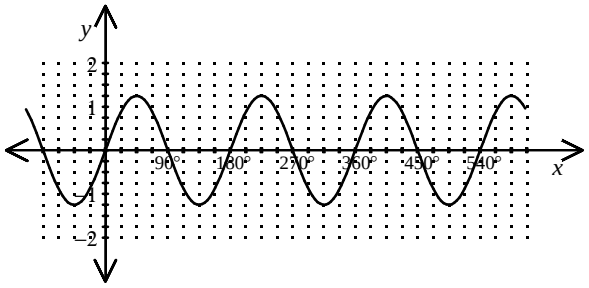
[A] $2,\ 90°,\ 2,\ y = 2\sin 2x$

[B] $1,\ 90°,\ \frac{1}{2},\ y = \sin\frac{1}{2}x$

[C] $1,\ 180°,\ 2,\ y = \sin 2x$

[D] $2,\ 180°,\ \frac{1}{2},\ y = 2\sin\frac{1}{2}x$

6.



[A] $\frac{5}{2},\ 180°,\ \frac{1}{2},\ y = \frac{5}{2}\sin\frac{1}{2}x$

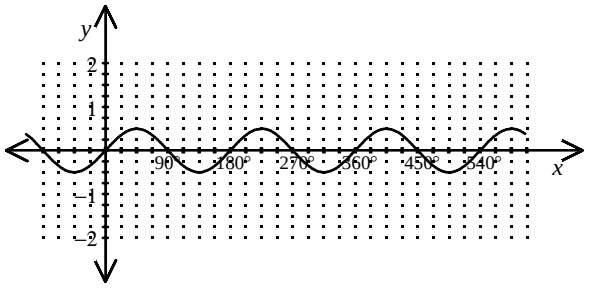
[B] $\frac{5}{4},\ 90°,\ \frac{1}{2},\ y = \frac{5}{4}\sin\frac{1}{2}x$

[C] $\frac{5}{2},\ 90°,\ 2,\ y = \frac{5}{2}\sin 2x$

[D] $\frac{5}{4},\ 180°,\ 2,\ y = \frac{5}{4}\sin 2x$

Find the amplitude, the period, and the frequency of the graph. Then write an equation for the sine function for the graph.

7.



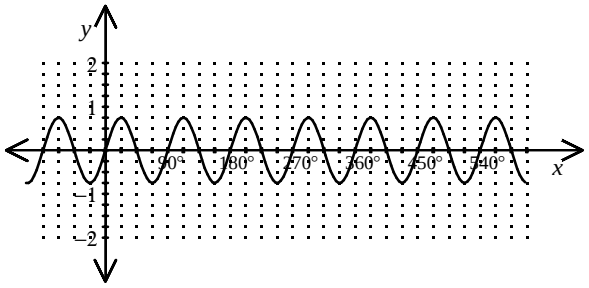
[A] $1,\ 90°,\ 2,\ y = \sin 2x$

[B] $\frac{1}{2},\ 90°,\ \frac{1}{2},\ y = \frac{1}{2}\sin\frac{1}{2}x$

[C] $\frac{1}{2},\ 180°,\ 2,\ y = \frac{1}{2}\sin 2x$

[D] $1,\ 180°,\ \frac{1}{2},\ y = \sin\frac{1}{2}x$

8.



[A] $\frac{3}{4},\ 45°,\ \frac{1}{4},\ y = \frac{3}{4}\sin\frac{1}{4}x$

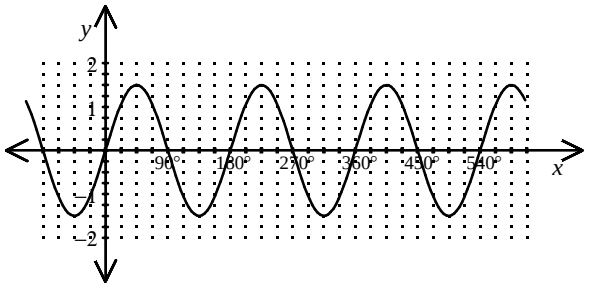
[B] $\frac{3}{2},\ 90°,\ \frac{1}{4},\ y = \frac{3}{2}\sin\frac{1}{4}x$

[C] $\frac{3}{4},\ 90°,\ 4,\ y = \frac{3}{4}\sin 4x$

[D] $\frac{3}{2},\ 45°,\ 4,\ y = \frac{3}{2}\sin 4x$

Find the amplitude, the period, and the frequency of the graph. Then write an equation for the sine function for the graph.

9.



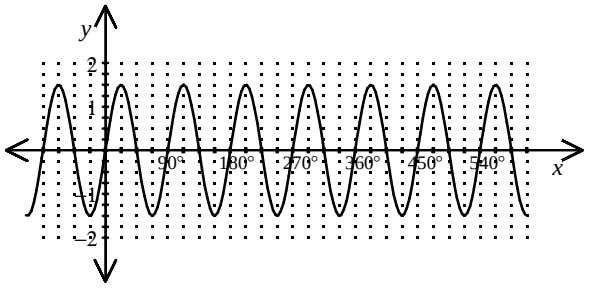
[A] $\frac{3}{2},\ 180°,\ 2,\ y=\frac{3}{2}\sin 2x$

[B] $\frac{3}{2},\ 90°,\ \frac{1}{2},\ y=\frac{3}{2}\sin\frac{1}{2}x$

[C] $3,\ 90°,\ 2,\ y=3\sin 2x$

[D] $3,\ 180°,\ \frac{1}{2},\ y=3\sin\frac{1}{2}x$

10.



[A] $\frac{3}{2},\ 45°,\ \frac{1}{4},\ y=\frac{3}{2}\sin\frac{1}{4}x$

[B] $3,\ 45°,\ 4,\ y=3\sin 4x$

[C] $\frac{3}{2},\ 90°,\ 4,\ y=\frac{3}{2}\sin 4x$

[D] $3,\ 90°,\ \frac{1}{4},\ y=3\sin\frac{1}{4}x$

11. The function $d=8\cos\frac{2\pi}{3}t$ describes a simple harmonic motion, where *d* is the distance an object travels in *t* units of time. What is the time required for one complete cycle?

[A] $\frac{1}{3}$ [B] 8 [C] 3 [D] $\frac{2\pi}{3}$

12. The function $d = 10\cos 6t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the maximum displacement of the object from its resting position?

[A] -10 [B] $\frac{\pi}{3}$ [C] 6 [D] 10

13. The function $d = 7\cos 2t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the frequency?

[A] $\frac{1}{\pi}$ [B] 7 [C] 2 [D] π

14. The function $d = 11\cos 8t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the maximum displacement of the object from its resting position?

[A] 11 [B] 8 [C] $\frac{\pi}{4}$ [D] -11

15. The function $d = -5\cos 4t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the time required for one complete cycle?

[A] $\frac{2}{\pi}$ [B] 4 [C] $\frac{\pi}{2}$ [D] -5

16. The function $d = -4\cos\frac{2\pi}{5}t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the maximum displacement of the object from its resting position?

[A] -4 [B] 4 [C] 5 [D] $\frac{2\pi}{5}$

17. The function $d = -12\cos 3t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the frequency?

[A] -12 [B] $\frac{3}{2\pi}$ [C] 3 [D] $\frac{2\pi}{3}$

18. The function $d = -6\cos 6t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the time required for one complete cycle?

[A] 6 [B] -6 [C] $\frac{3}{\pi}$ [D] $\frac{\pi}{3}$

19. The function $d = -9\cos 2t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the maximum displacement of the object from its resting position?

[A] -9 [B] 9 [C] 2 [D] π

20. The function $d = 2\cos 8t$ describes a simple harmonic motion, where d is the distance an object travels in t units of time. What is the time required for one complete cycle?

[A] $\frac{4}{\pi}$ [B] 2 [C] $\frac{\pi}{4}$ [D] 8

21. The function $d = 7\cos 3t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the frequency?

[A] 7 cycles/second [B] 3 cycles/second

[C] $\frac{3}{2\pi}$ cycle / second [D] $\frac{2\pi}{3}$ cycles / second

22. The function $d = -6\cos 2t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

[A] π m [B] $\frac{1}{\pi}$ m [C] 2 m [D] 6 m

23. The function $d = 12\cos 8t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

[A] 12 m [B] $\frac{4}{\pi}$ m [C] $\frac{\pi}{4}$ m [D] 8 m

24. The function $d = 11\cos \pi t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the frequency?

[A] 2 cycles/second [B] π cycles / second

[C] $\frac{1}{2}$ cycle / second [D] 11 cycles/second

25. The function $d = -2\cos 6t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?

[A] $\frac{\pi}{3}$ sec [B] 6 sec [C] 2 sec [D] $\frac{3}{\pi}$ sec

26. The function $d = -10\cos 3t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?

[A] 3 sec [B] $\frac{2\pi}{3}$ sec [C] 10 sec [D] $\frac{3}{2\pi}$ sec

27. The function $d = 3\cos 2t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

[A] 2 m [B] $\frac{1}{\pi}$ m [C] 3 m [D] π m

28. The function $d = -9\cos 8t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?

[A] 9 sec [B] $\frac{4}{\pi}$ sec [C] 8 sec [D] $\frac{\pi}{4}$ sec

29. The function $d = -5\cos\frac{\pi}{2}t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

[A] 5 m [B] $\frac{1}{4}$ m [C] 4 m [D] $\frac{\pi}{2}$ m

30. The function $d = 12\cos 2t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?

31. The function $d = 8\cos 4t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

32. The function $d = -7\cos 6t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the frequency?

33. The function $d = -4\cos\frac{\pi}{3}t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?

34. The function $d = -6\cos 3t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

35. The function $d = -10\cos 8t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the frequency?

36. The function $d = 9\cos 2t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the frequency?

37. The function $d = 5\cos 4t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the maximum displacement of the object from its resting position?

38. The function $d = 2\cos 6t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?

39. The function $d = 11\cos \pi t$ describes a simple harmonic motion, where d is the distance (in meters) an object travels in t seconds. What is the time required for one complete cycle?