

Name _____
Period _____

Sec 3

WKS 6.10 Trig Graphs

Determine the amplitude and period of each function. (Write Period in both Radian and Degree)

1. $y = \sin 4x$

2. $y = \cos 5x$

3. $y = 2 \sin x$

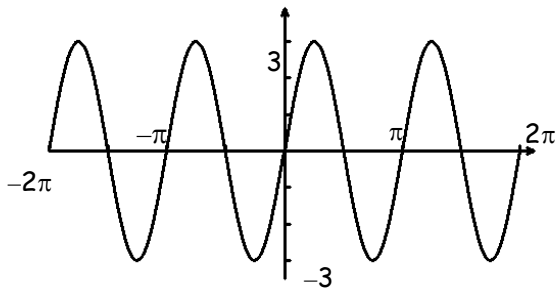
4. $y = -4 \sin 3x$

5. $y = 2 \sin (-4x)$

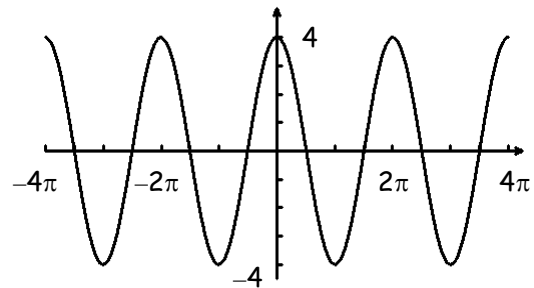
6. $y = 3 \sin \frac{2}{3}x$

Give the amplitude and period of each function graphed below. Then write an equation of each graph.

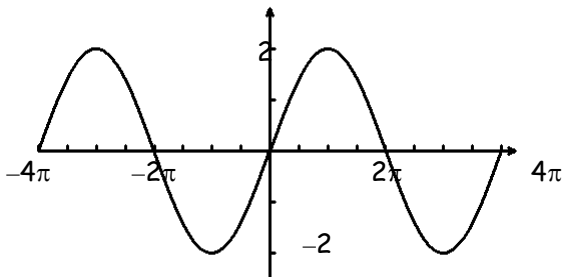
7.



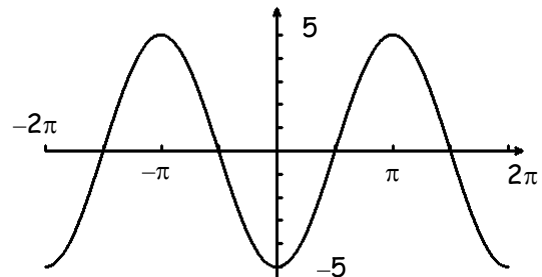
8.



9.

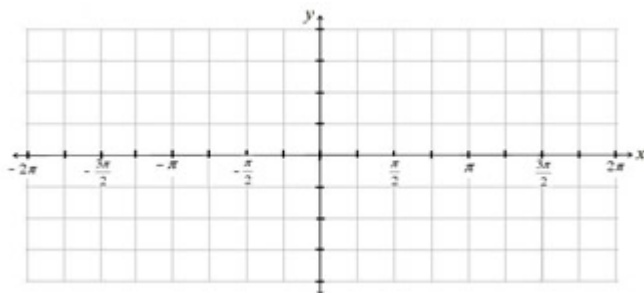


10.

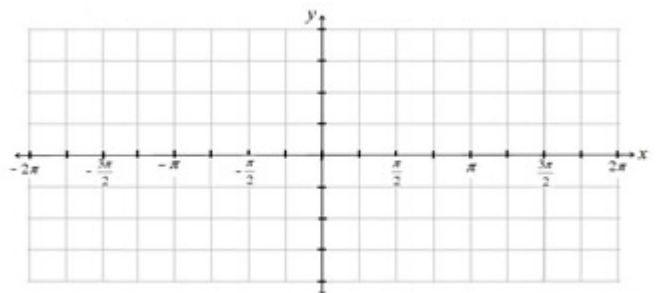


Sketch the graph of the function over the interval $-2\pi \leq x \leq 2\pi$.

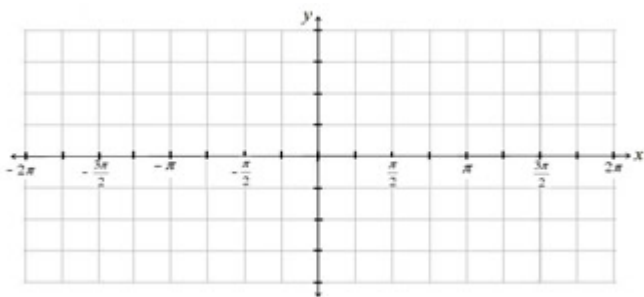
11. $y = 4 \sin x$



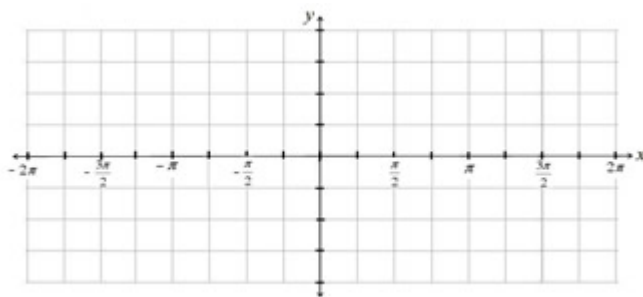
12. $y = 2 \cos x$



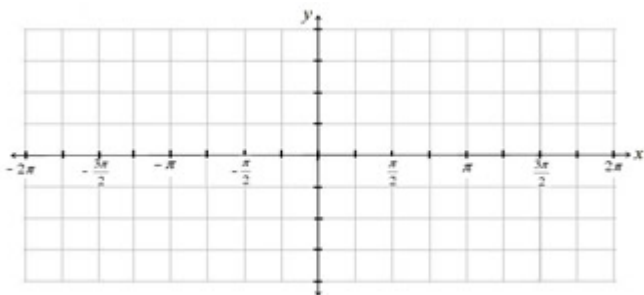
13. $y = 2 \sin 2x$



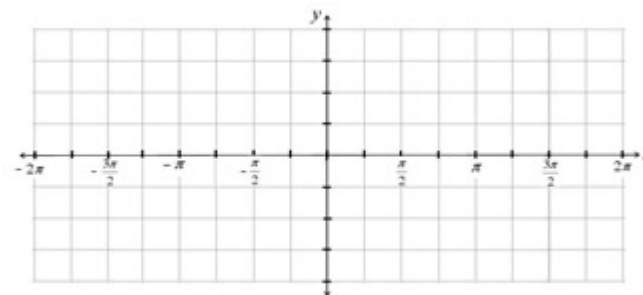
14. $y = -\cos 2x$



15. $y = 3 \cos \frac{1}{2}x$



16. $y = -2 \sin (4x)$



Determine the amplitude, period, phase shift, and vertical shift for each.

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

18. $y = 2 \cos (x - \pi)$

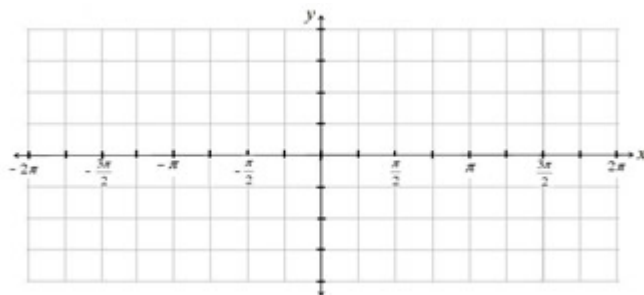
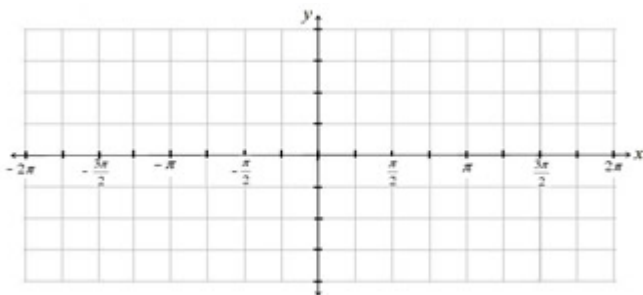
19. $y = \frac{1}{2} \cos 2x - 4$

20. $y = 3 + 4 \sin (x - \pi)$

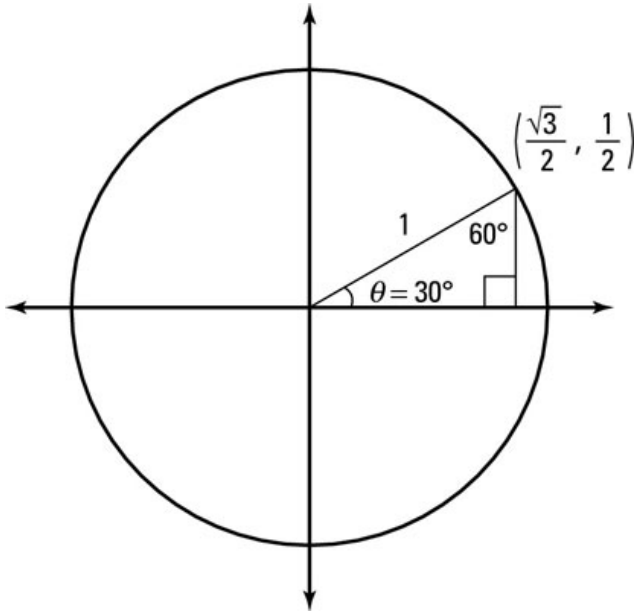
Sketch the graph of each function for **ONE PERIOD**.

21. $y = 1 + 3 \sin \left(2x - \frac{\pi}{2} \right)$

22. $y = 2 \cos (x + \pi) - 2$



Use the given graphic below to match questions 23-26:
(some may be used more than once or not at all)



23. $\sin 30 =$ _____

a. $\frac{1}{2}$

24. $\cos 60 =$ _____

b. $-\frac{1}{2}$

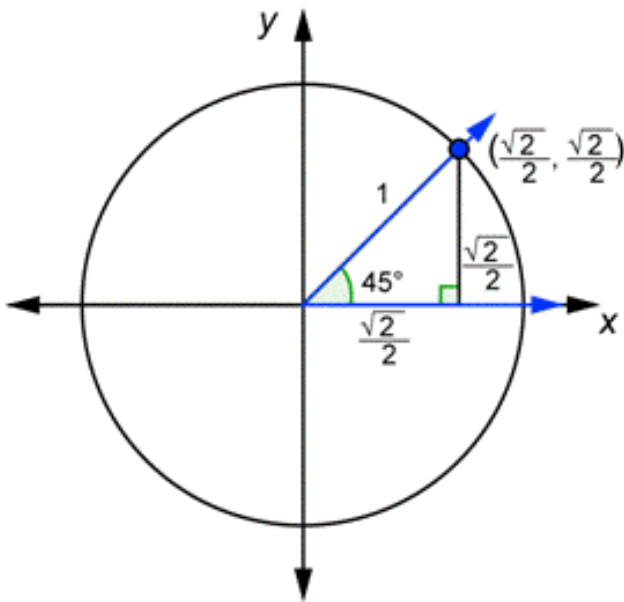
25. $\sin \frac{5\pi}{6} =$ _____

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

26. $\cos \frac{7\pi}{6} =$ _____

d. $-\frac{\sqrt{3}}{2}$

Use the given graphic below to match questions 27-30: (some may be used more than once or not at all)



27. $\sin 45 =$ _____

a. 0

28. $\cos 135 =$ _____

b. 1

29. $\sin \frac{5\pi}{4} =$ _____

c. $\frac{\sqrt{2}}{2}$

30. $\cos \frac{7\pi}{4} =$ _____

d. $-\frac{\sqrt{2}}{2}$

31. Which equation below shows the speed doubling?

a. $y = 2\sin x$

b. $y = \sin 2x$

c. $y = \sin x + 2$

d. $y = \sin(x-2)$

32. Which equation below shows the radius doubling?

a. $y = 2\sin x$

b. $y = \sin 2x$

c. $y = \sin x + 2$

d. $y = \sin(x-2)$

33. Which sine equation has an amplitude = 5, up 3, rotating at 15 degrees per second.

a. $y = 3\sin(15x) + 5$

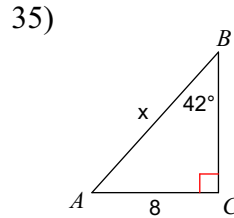
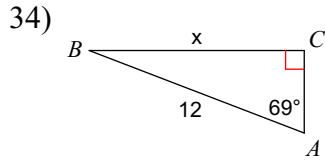
b. $y = 5\sin(3x) + 15$

c. $y = 5\sin(15x) + 3$

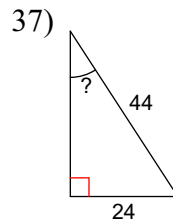
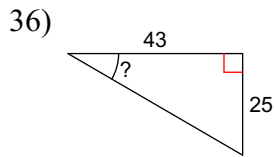
d. $y = 5\sin(30x) + 3$

6.10 WKS... continued

Find the measure of each side indicated. Round to the nearest tenth.



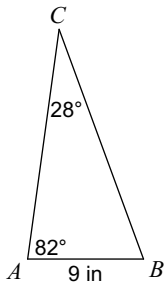
Find the measure of the indicated angle to the nearest degree.



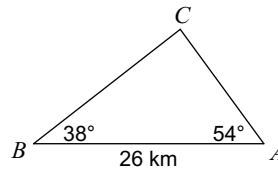
Use LAW OF SINES to find the indicated side or angle. Round to the nearest tenth.

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

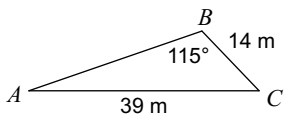
38) Find BC



39) Find AC



40) Find $m\angle A$



41) Find $m\angle B$

