Pre-Calculus
1.5 Graphs of Sine and Cosine Functions
Assignment #44

Name_____

Period_____ Group #_____

Determine the amplitude and period of each function.

1. $y = \sin 4x$

Amplitude = _____

Period = _____

2. $y = \cos 5x$

Amplitude = _____

Period=_____

3. $y = \sin x$

Amplitude=_____

Period=_____

4. $y = 4\cos x$

Amplitude = _____

Period = _____

5. $y = -2\sin x$

Amplitude = _____

Period=_____

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

Amplitude=_____

Period=_____

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

Amplitude = _____

Period = _____

8. $y = -4\cos 5x$

Amplitude = _____

Period=_____

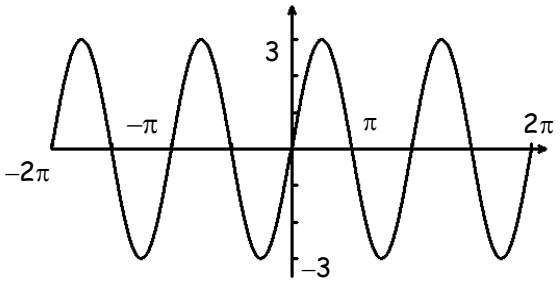
9. $y = 3\cos(-2x)$

Amplitude=_____

Period=_____

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

10.

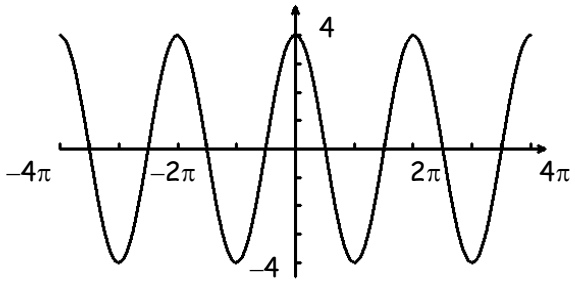


Amplitude = _____

Period = _____

Equation: _____

11.

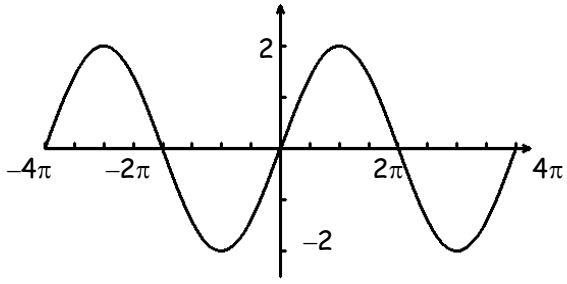


Amplitude=_____

Period=_____

Equation:_____

12.

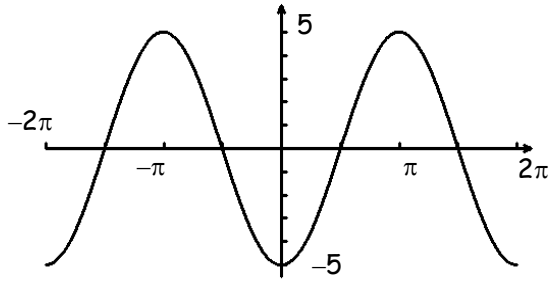


Amplitude = _____

Period = _____

Equation: _____

13.



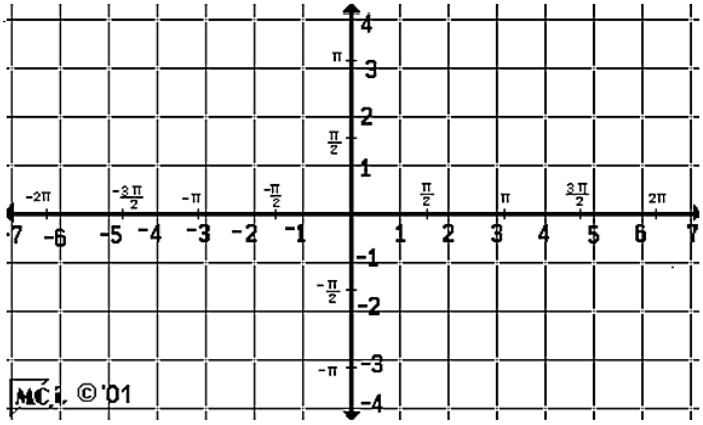
Amplitude=_____

Period=_____

Equation:_____

Give the amplitude and period of each function. Then sketch the graph of the function over the interval $-2\pi \le x \le 2\pi$ using the key points for each function.

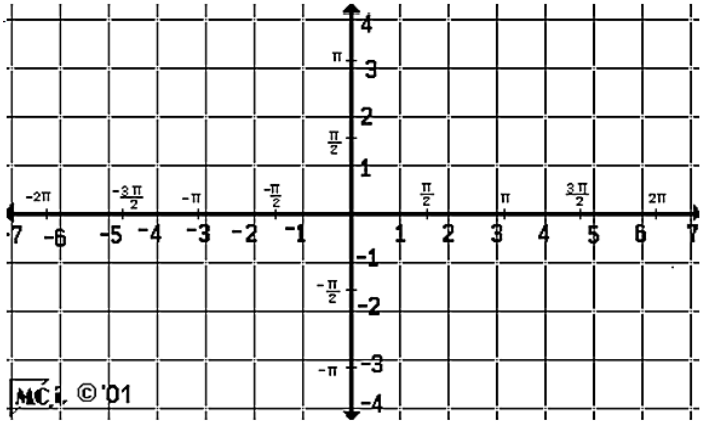
14. $y = 3 \sin x$



Amplitude = _____

Period = _____

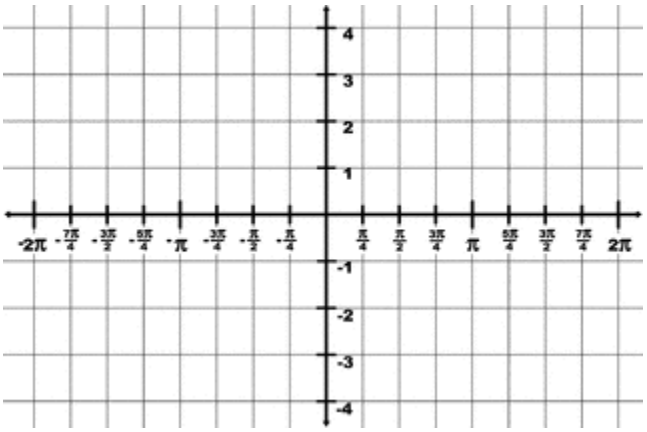
15. $y = 2 \cos x$



Amplitude=_____

Period=_____

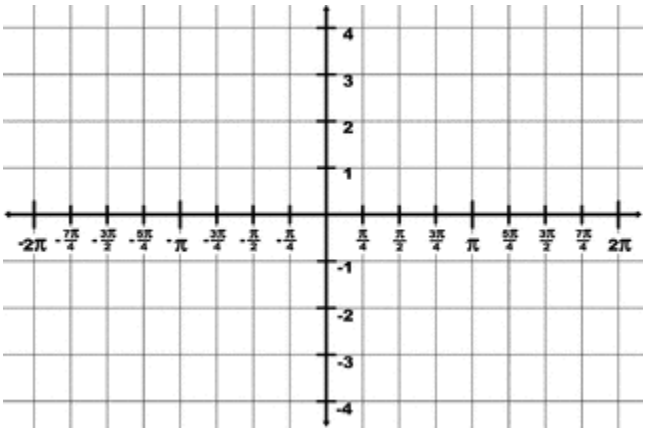
16. $y = 3 \sin 2x$



Amplitude = _____

Period = _____

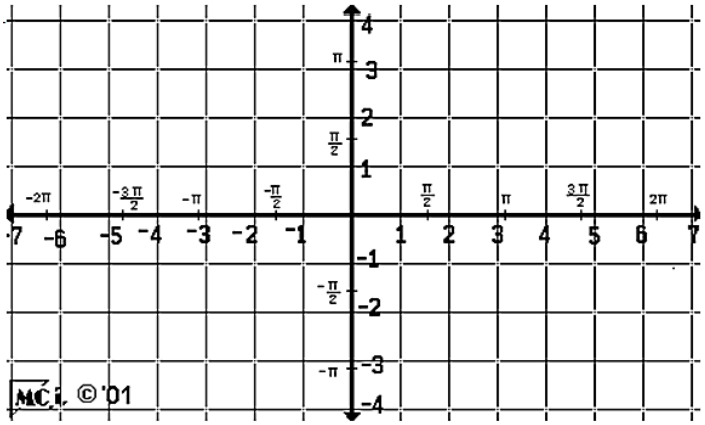
17. $y = 4 \cos 2x$



Amplitude=_____

Period=_____

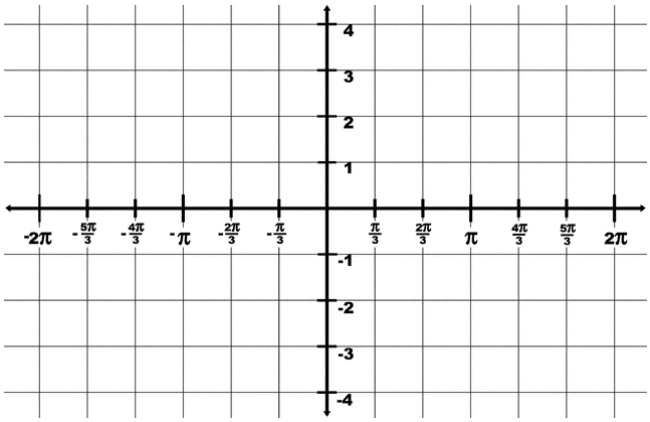
18. $y = 3\cos\frac{1}{2}x$



Amplitude = _____

Period = _____

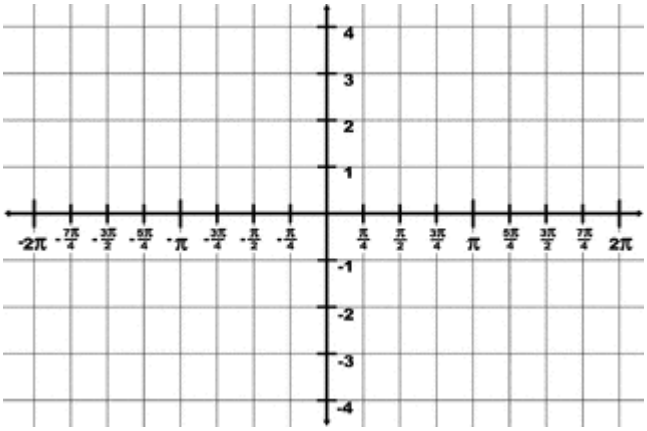
19. $y = \cos(-3x)$



Amplitude=_____

Period=_____

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



Amplitude = _____

Period = _____

21. Find an equation for a sine function that has amplitude of 4, a period of π.

22. Find an equation for a cosine function that has an amplitude of $\frac{3}{5}$, a period of $\frac{3}{2}\pi$.

23. Find an equation for a sine function that has amplitude of 5, a period of 3π.

HOW OFTEN DID THE STUDENT WHO GOT "C" ON HIS TRIG FUNCTIONS TEST DO HIS HOMEWORK?

f(x) = Asin(Bx) f(x) = Acos(Bx)

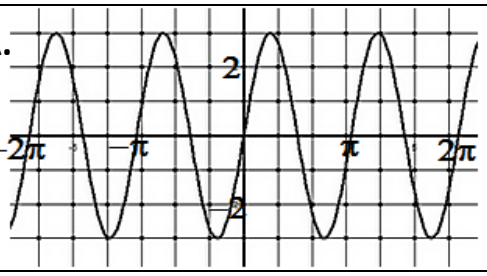
|A| = Amplitude

B represents the number of complete waves in an interval of 2π, therefore $\frac{2\pi}{B}$ = Period

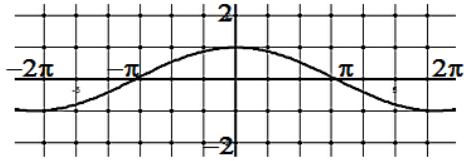
1) $f(x)=2\sin x$	2) $f(x)=\sin(2x)$	3) $f(x)=\sin\frac{x}{4}$	4) $f(x)=\cos\left(\frac{1}{2}x\right)$
5) $f(x)=\cos(3x)$	6) $f(x)=\frac{1}{2}\sin(3x)$	9) $f(x)=\frac{3}{2}\sin\left(\frac{1}{2}x\right)$	10) $f(x)=4\cos(\pi x)$
7) $f(x)=3\sin(2x)$	8) $f(x)=4\sin x$	11) $f(x)=3\sin\frac{x}{3}$	12) $f(x)=2\cos(3x)$

Match each function from above with a graph below.

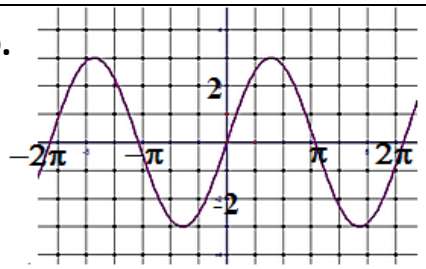
A.



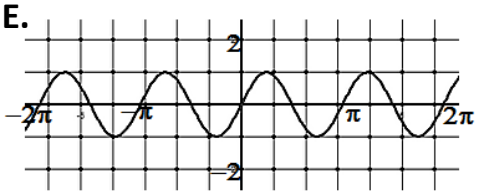
C.



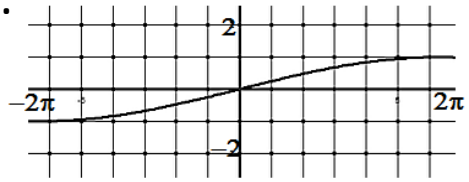
D.



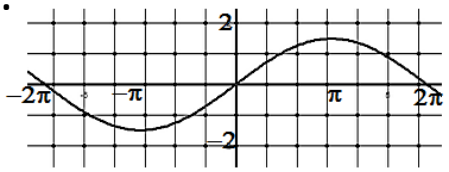
E.



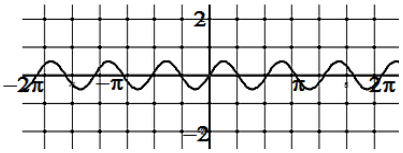
I.



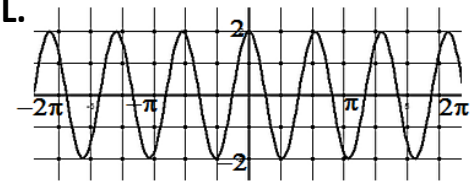
I.



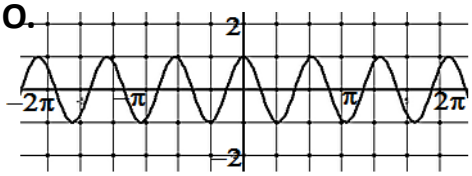
L.



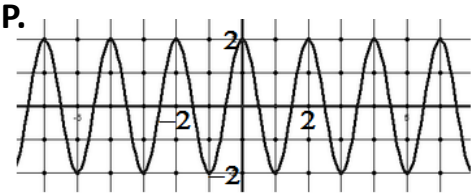
L.



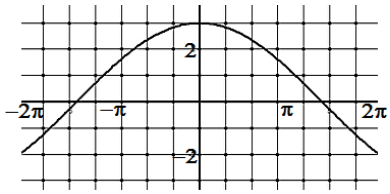
O.



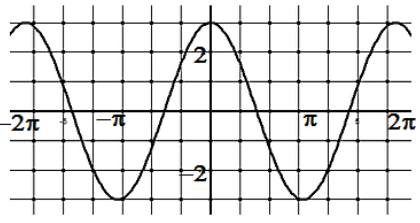
P.



R.



Y.



8	2	11	3	5	1	7	4	9	12	6	10