

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 = _____

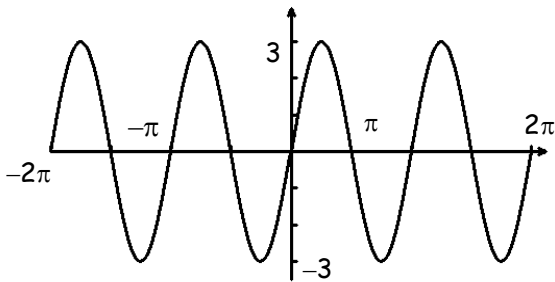
7. $y = 3 \sin \frac{2}{3}x$
Amplitude = _____
Period = _____

8. $y = -4 \cos 5x$
Amplitude = _____
Period = _____

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

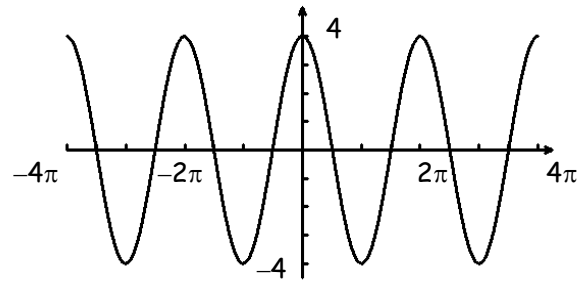
Give the amplitude and period of each function graphed below. Then write an equation of each graph.

10.



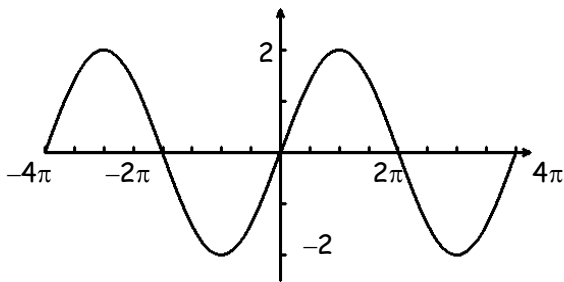
Amplitude = _____
Period = _____
Equation: _____

11.



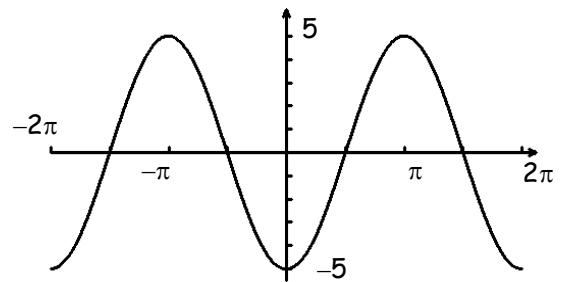
Amplitude = _____
Period = _____
Equation: _____

12.



Amplitude = _____
Period = _____
Equation: _____

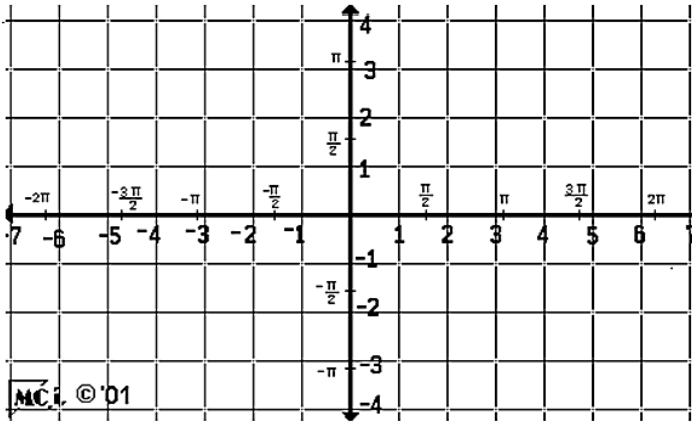
13.



Amplitude = _____
Period = _____
Equation: _____

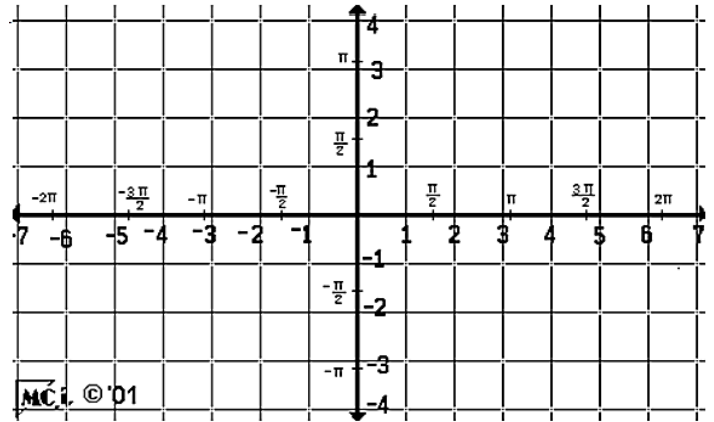
Give the amplitude and period of each function. Then sketch the graph of the function over the interval $-2\pi \leq x \leq 2\pi$ using the key points for each function.

14. $y = 3 \sin x$



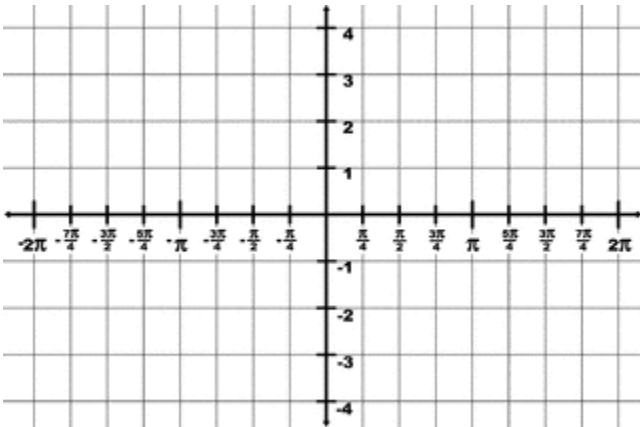
Amplitude = _____
 Period = _____

15. $y = 2 \cos x$



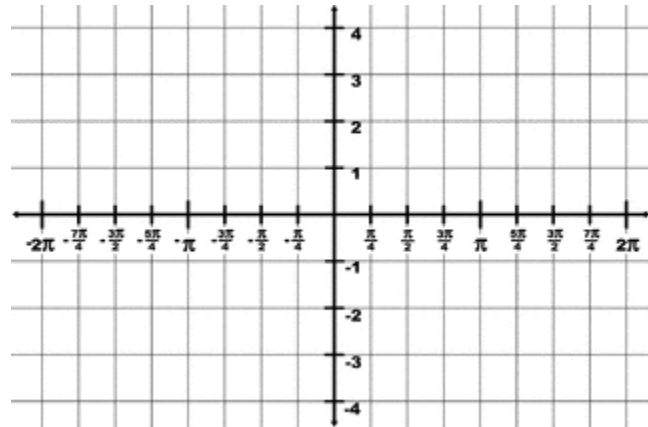
Amplitude= _____
 Period= _____

16. $y = 3 \sin 2x$



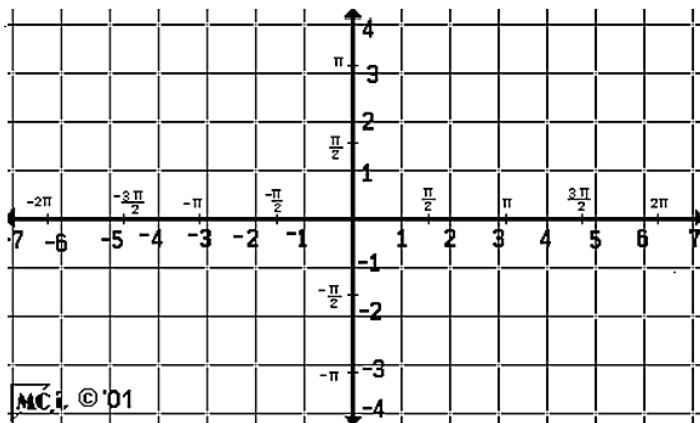
Amplitude = _____
 Period = _____

17. $y = 4 \cos 2x$



Amplitude= _____
 Period= _____

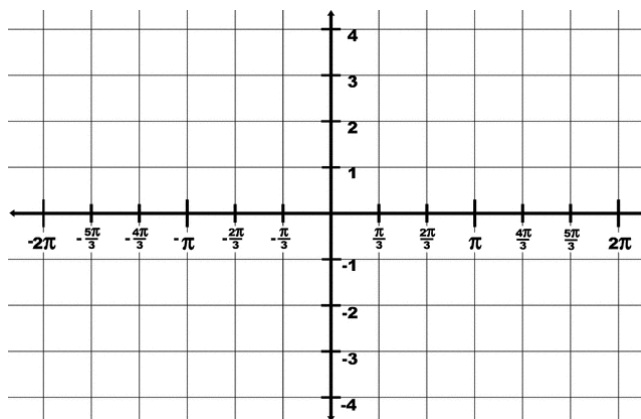
18. $y = 3 \cos \frac{1}{2} x$



Amplitude = _____

Period = _____

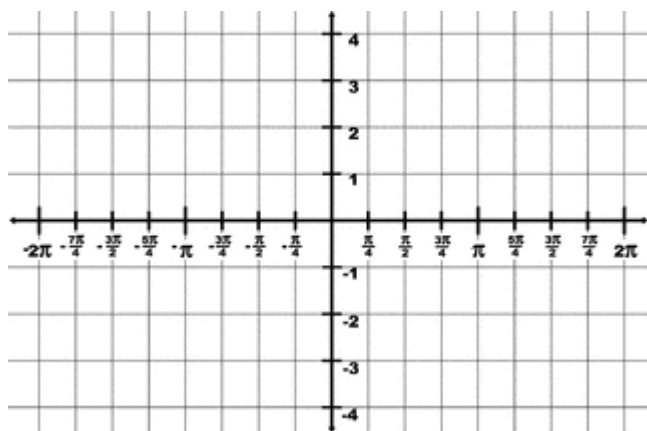
19. $y = \cos(-3x)$



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?

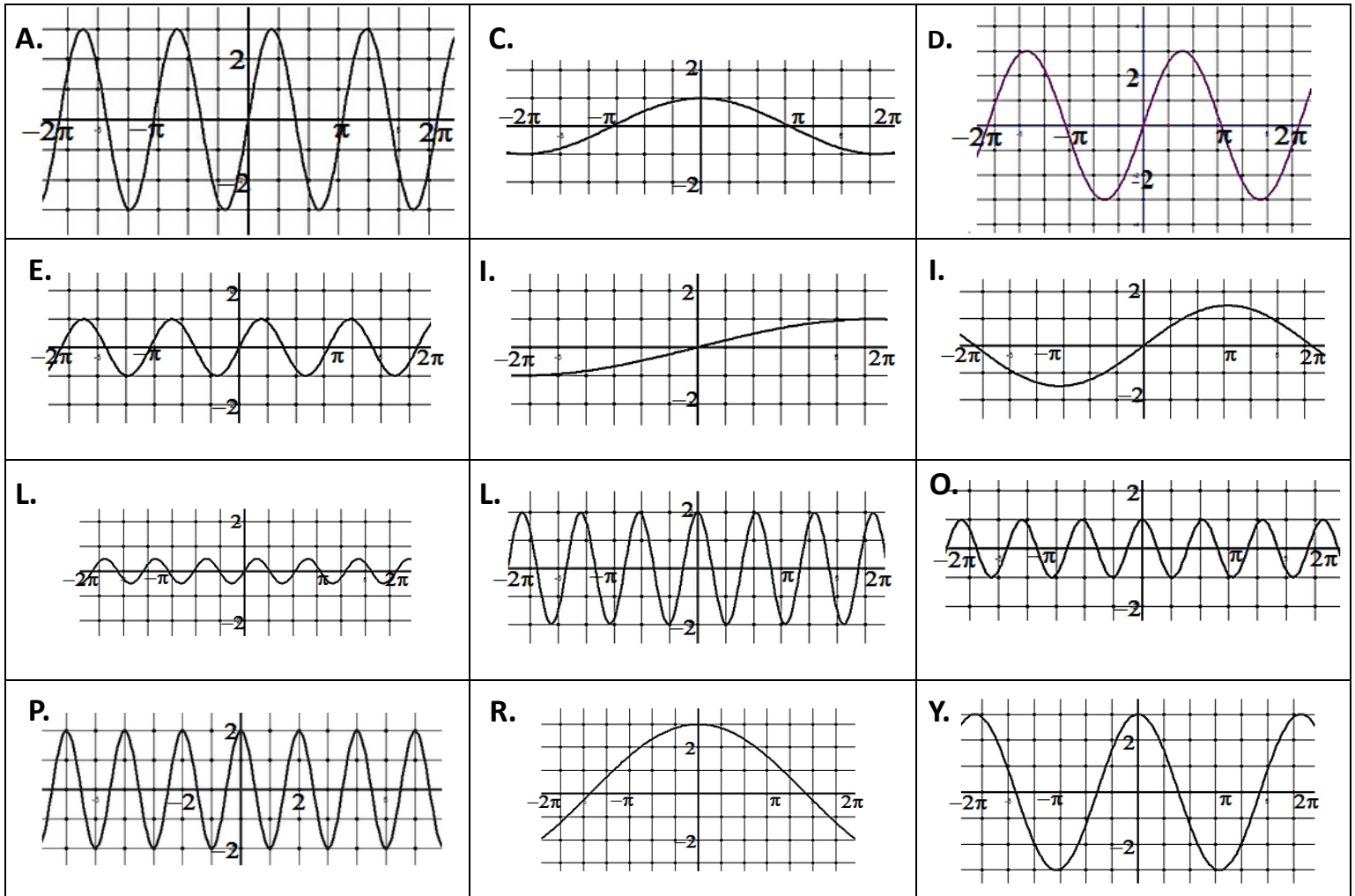
$$f(x) = A\sin(Bx) \quad f(x) = A\cos(Bx)$$

$|A|$ = 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.



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