

8.1A

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

Match each function from above with a graph below.

<p>A.</p>	<p>C.</p>	<p>D.</p>
<p>E.</p>	<p>I.</p>	<p>J.</p>
<p>L.</p>	<p>M.</p>	<p>N.</p>
<p>P.</p>	<p>R.</p>	<p>Y.</p>

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

Trig
Graphs of Sine and Cosine Functions

Name _____

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 = _____

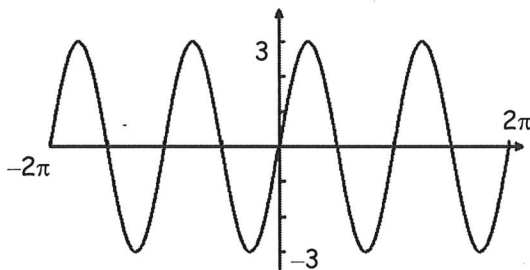
9. $y = 3 \cos (-2x)$

Amplitude = _____

Period = _____

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

10.

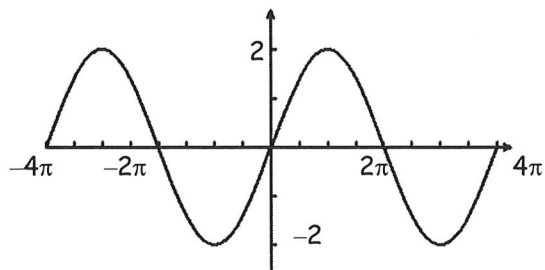


Amplitude = _____

Period = _____

Equation: _____

12.

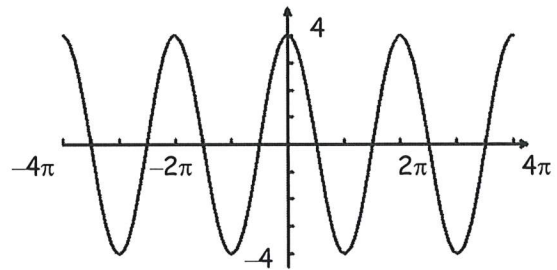


Amplitude = _____

Period = _____

Equation: _____

11.

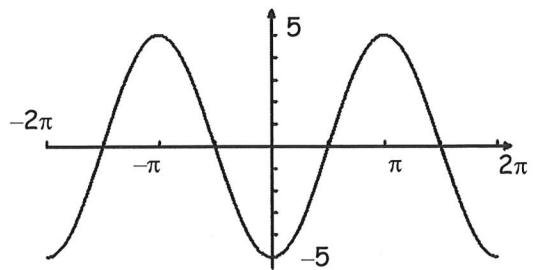


Amplitude = _____

Period = _____

Equation: _____

13.



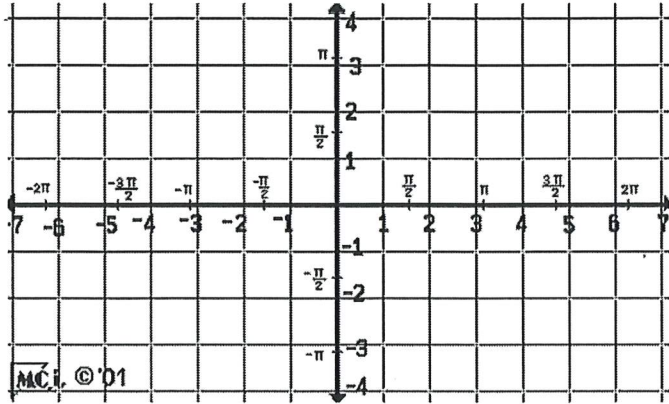
Amplitude = _____

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.

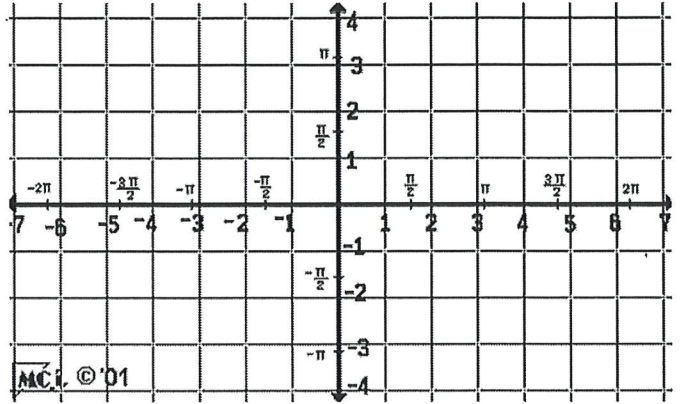
14. $y = 3 \sin x$



Amplitude = _____

Period = _____

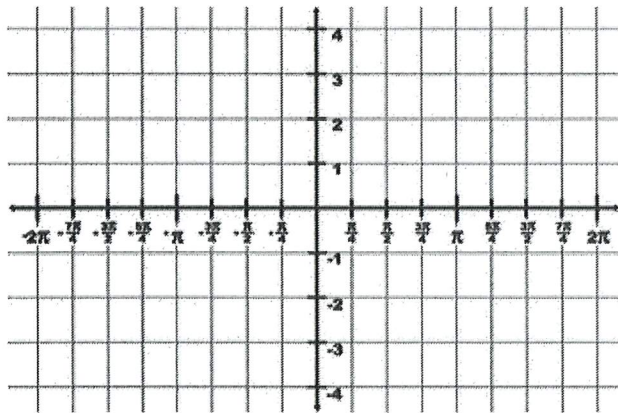
15. $y = 2 \cos x$



Amplitude = _____

Period = _____

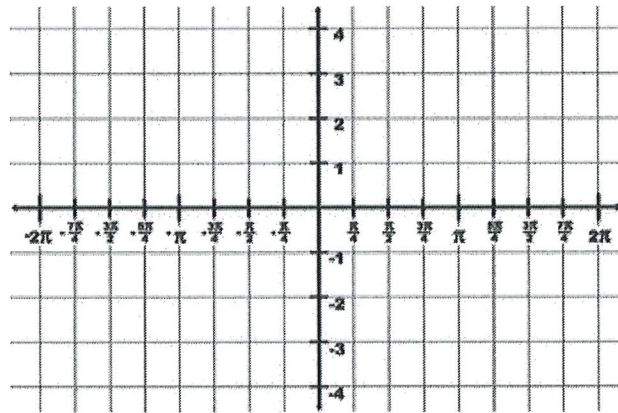
16. $y = 3 \sin 2x$



Amplitude = _____

Period = _____

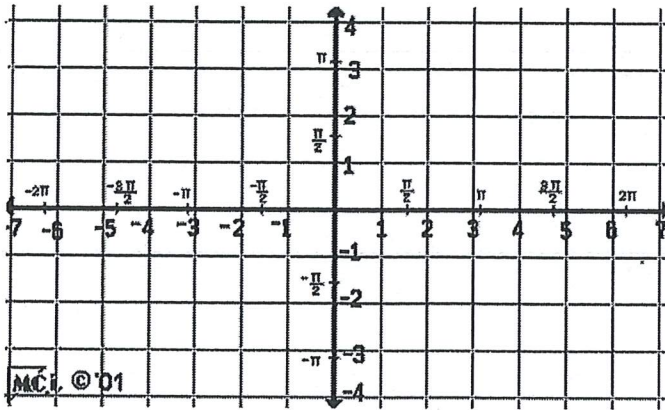
17. $y = 4 \cos 2x$



Amplitude = _____

Period = _____

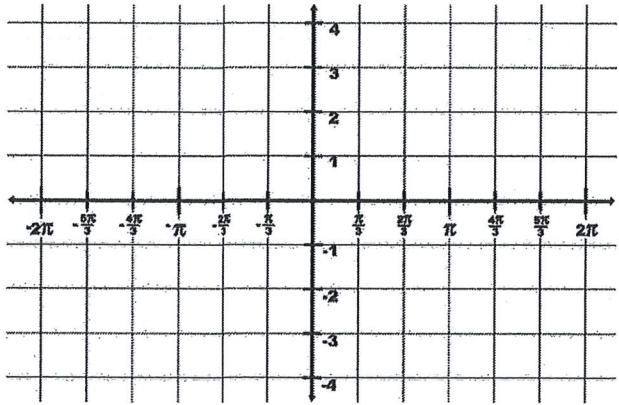
18. $y = 3 \cos \frac{1}{2} x$



Amplitude = _____

Period = _____

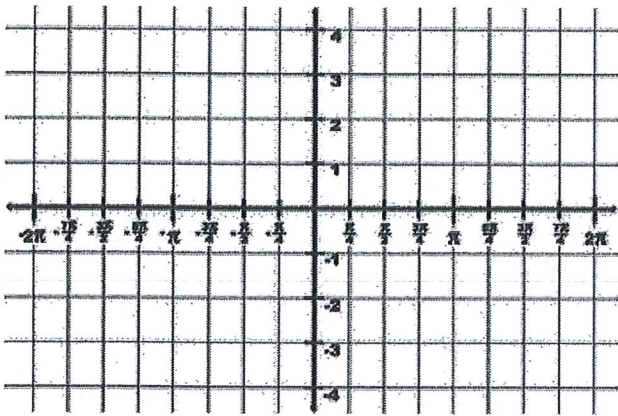
19. $y = \cos(-3x)$



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 .