

Math III

~~Algebra 2~~

Name _____

Graphs of Sine and Cosine Functions

Period _____

1. What are the domain and range of the sine function?
2. What are the domain and range of the cosine function?

For problems 3-5, find the amplitude and period of the function. Do not graph.

3. $y = \sin 4x$

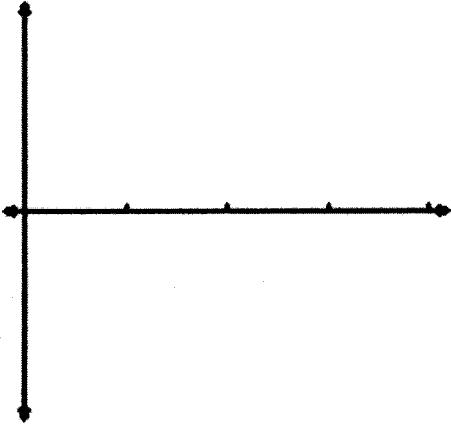
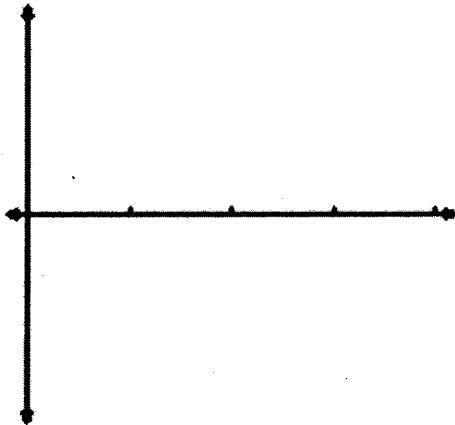
4. $y = 3 \cos \pi x$

5. $y = 2\pi \sin x$

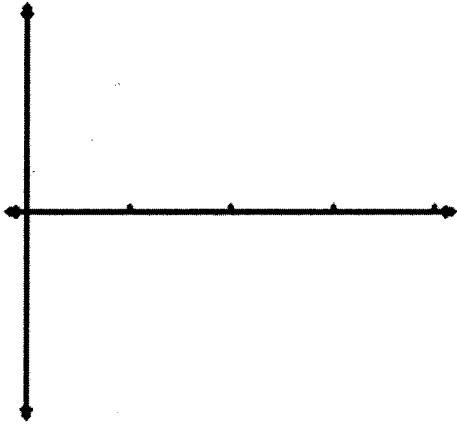
Graph the following functions. Graph at least one period of the function. Make sure you label both axes. Identify amplitude and period.

6. $y = 4 \cos x$

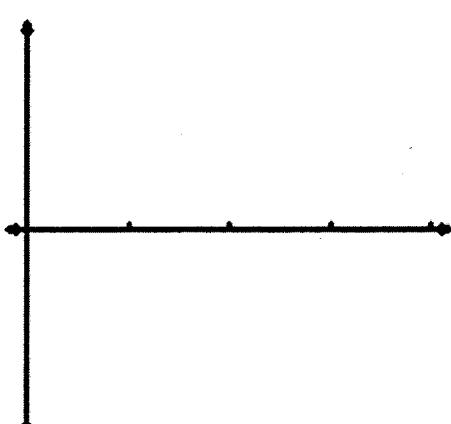
7. $y = \frac{2}{3} \sin x$



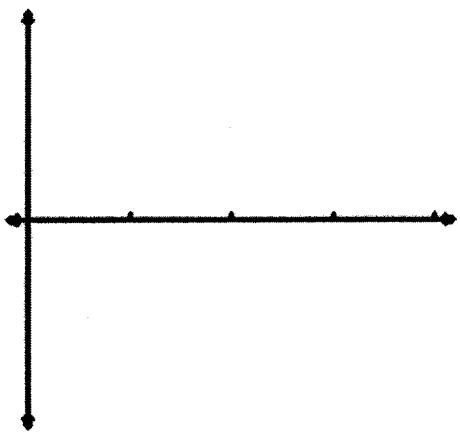
8. $y = 2 \cos 2x$



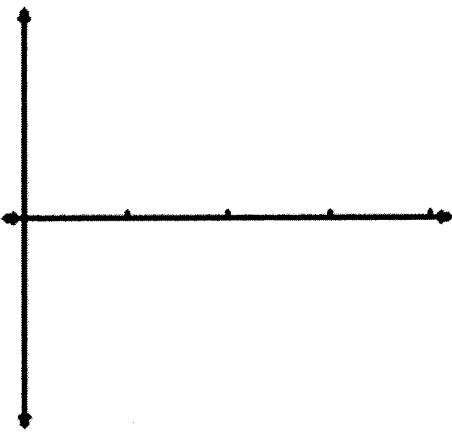
9. $y = 3 \sin 4x$



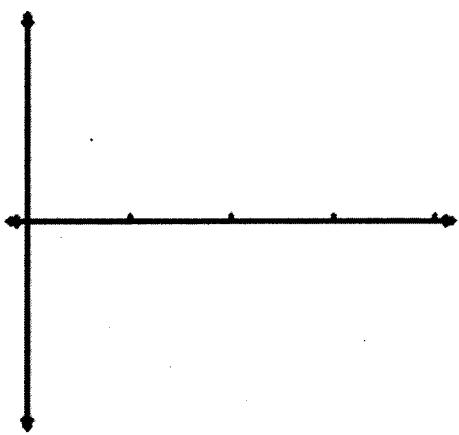
10. $y = \sin \frac{\pi}{2}x$



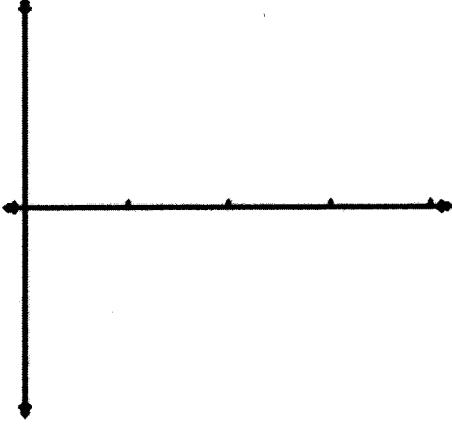
11. $y = 2 \cos \frac{2}{5}x$



12. $y = 2 \sin 8x$



13. $y = 3 \cos \pi x$



Algebra 2
Transformations of Sine & Cosine

Name _____
Period _____

Describe any phase shift and vertical shift in the graph.

1. $y = 3 \sin x + 1$

2. $y = 4 \cos(x + 1) - 2$

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

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

Graph at least one period of the following functions. Use additional paper if necessary.

5. $y = 2 \cos x + 1$

6. $y = -\sin x - 2$

7. $y = \cos(x - \pi) + 3$

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

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

10. $y = 2 \sin 4x + 3$

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

12. $y = 2 \sin \frac{\pi}{2}x - 2$