Name: _____ Date: _____ Period: ___ Assignment #_____

9.4A WS - Graphing Sine & Cosine w/ Amplitude and Period

For $y = a\sin bx$ or $y = a\cos bx$: Amplitude (A) = $|a|$ and Period (P) = $\frac{2\pi}{|b|}$

#1–6: Determine the amplitude (A) and the period (P) of each function.

1. $y = \sin 4x$

2. $y = \cos 5x$

3. $y = -2\sin x$

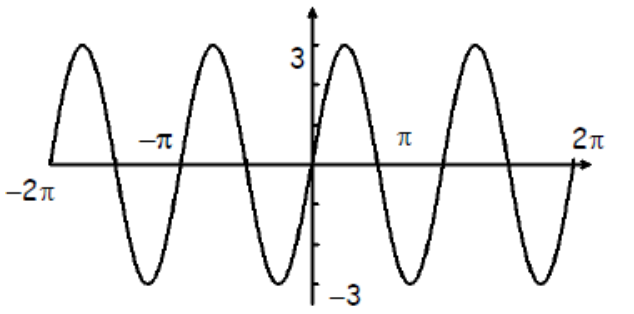
4. $y = -4\cos 5x$

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

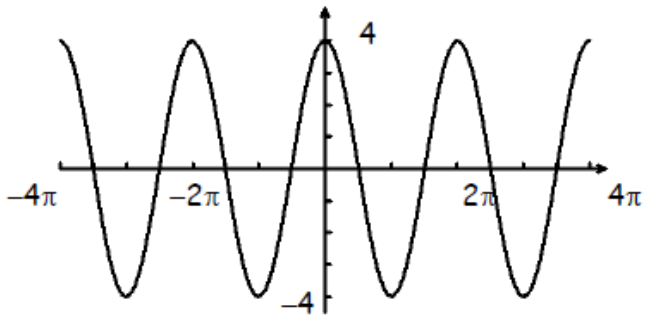
6. $y = \frac{1}{2}\cos(-4x)$

#7-10: Give the amplitude (A) and the period (P) of each function graphed below. Then write an equation of each graph.

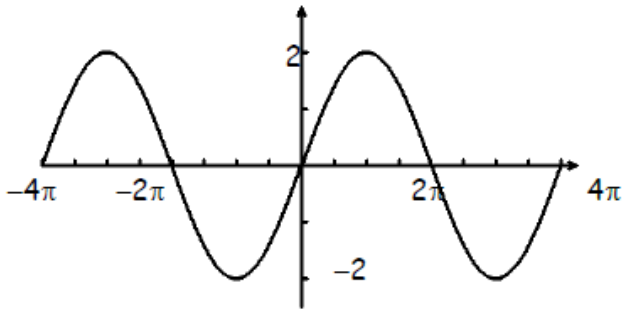
7. _____



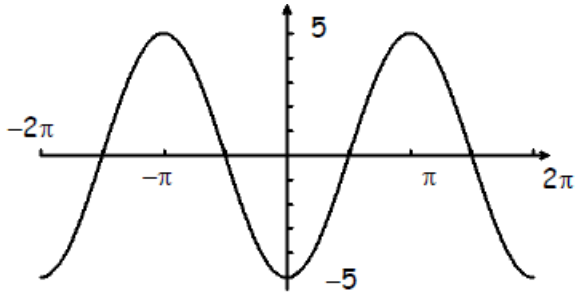
8. _____



9. _____



10. _____



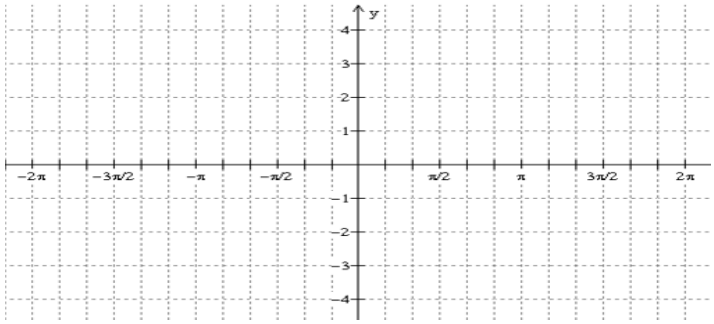
#11-15: Give the amplitude (A) and the period (P) of each function. Then graph the function over the interval $-2\pi \le x \le 2\pi$. Be as accurate with your graphing as possible. Make sure your x-intercepts and y-intercept are correct. Find the range of each function.

11. $y = 3 \sin x$

Amplitude: _____

Period: _____

Range: _____

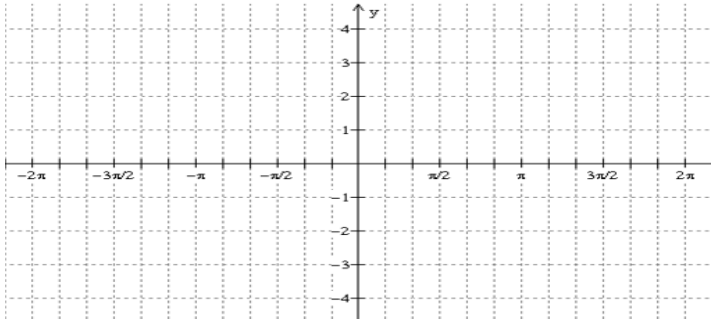


12. $y = 2 \cos x$

Amplitude: _____

Period: _____

Range: _____

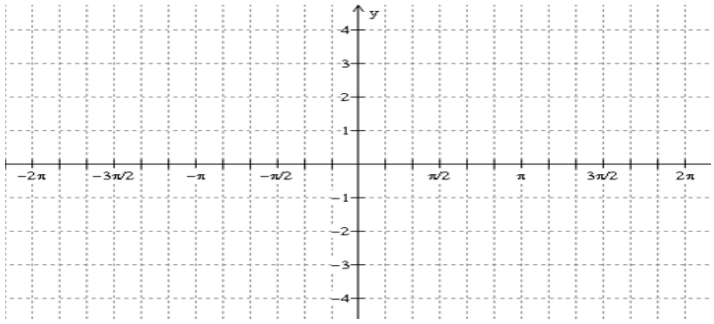


13. $y = 4 \cos 2x$

Amplitude: _____

Period: _____

Range: _____

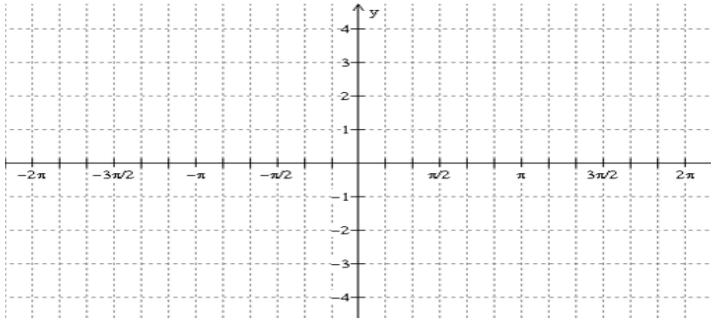


14. $y = -3 \sin \frac{1}{2}x$

Amplitude: _____

Period: _____

Range: _____



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

Amplitude: _____

Period: _____

Range: _____