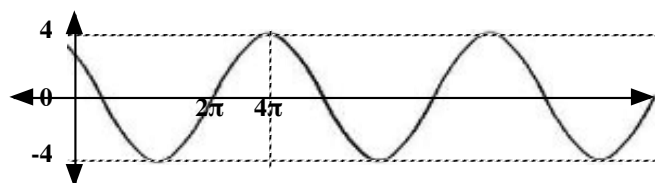


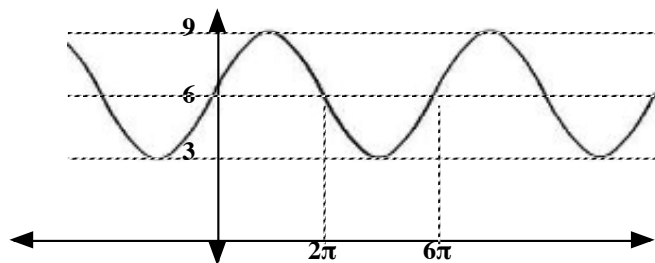
# PC 12 LG 7 Review Sheet (Trigonometric Graphing)

1. Determine the amplitude and the period, in both degrees and radians, for  $y = -5\cos\left(\frac{1}{2}x\right)$ .

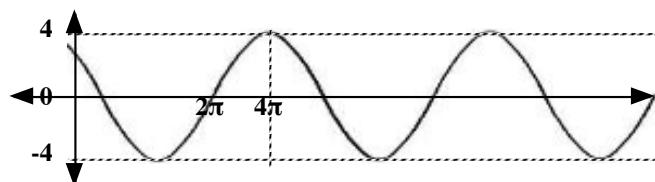
2. Determine the amplitude and the period for the function graphed below:



3. Given the sinusoidal curve graphed below, write its equation in the form  $y = a\sin b(x - c) + d$  &  $y = a\cos b(x - c) + d$ .



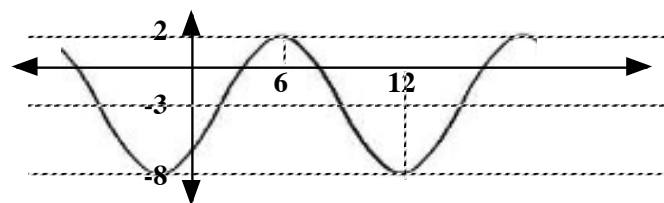
4. Given the sinusoidal curve graphed below, write its equation in the form  $y = a\sin b(x - c) + d$  &  $y = a\cos b(x - c) + d$ .



5. Given the function  $y = -5\cos\left(2x + \frac{\pi}{6}\right) - 7$  find:

- amplitude
- period
- vertical displacement
- phase shift
- domain
- range
- minimum value of  $y$
- maximum value of  $y$

6. Find the amplitude, period, and vertical displacement of the sinusoidal curve graphed below.

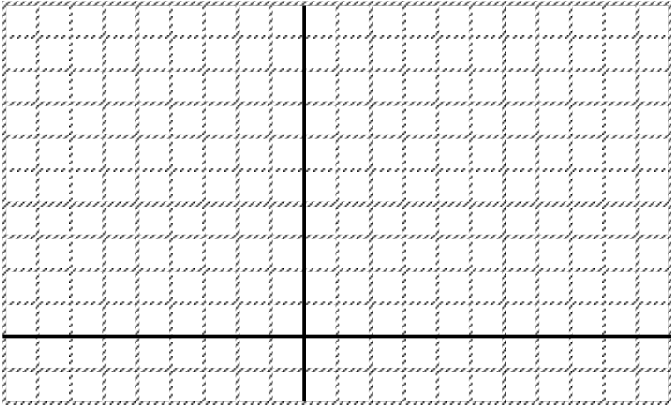


- amplitude
- period
- vertical displacement

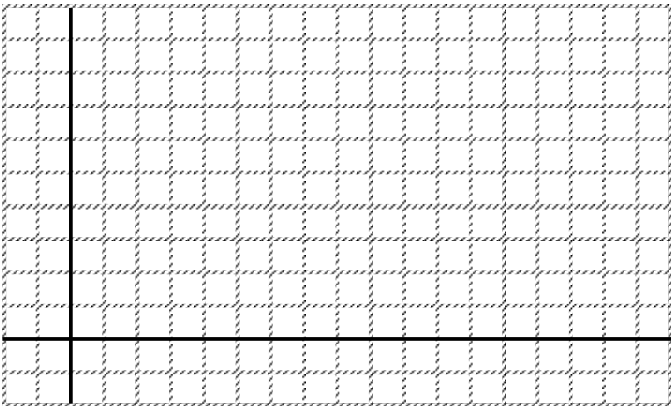
7. Write an equation of the cosine function with amplitude  $0.5$ , period  $10\pi$ , phase shift  $\frac{\pi}{6}$  to the right, and vertical displacement  $-9$ .

# PC 12 LG 7 Review Sheet (Trigonometric Graphing)

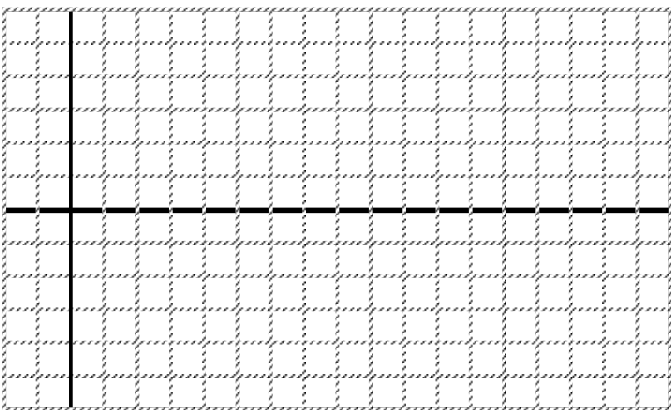
8. Determine the equation of the sinusoidal function with a minimum at  $(-8, 3)$  and the nearest maximum to the right at  $(0, 9)$ . Write the equations in the form  $y = a\sin b(x - c) + d$  or  $y = a\cos b(x - c) + d$ .



9. Sketch the graph of the following function.  
 $y = -3\cos(2x - 90^\circ) + 5, 0^\circ \leq x < 360^\circ$



10. Sketch the graph of the following function.  
 $y = 4\sin\left(3x - \frac{\pi}{2}\right) + 1$  for 2 cycles.



## Answer Key

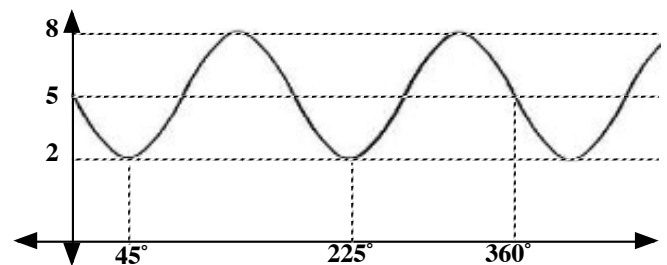
- amp. = 5, period =  $4\pi$  or  $720^\circ$
- amp. = 4, period =  $8\pi$
- $y = -3\sin\frac{1}{4}(x - 2\pi) + 6$  &  $y = -3\cos\frac{1}{4}(x - 4\pi) + 6$
- $y = 4\sin\frac{1}{4}(x - 2\pi) + 0$  &  $y = 4\cos\frac{1}{4}(x - 4\pi) + 0$
- amplitude = 5  
 period =  $\pi$   
 vert. displ. = -7  
 ph. shift =  $\frac{\pi}{12}$  left  
 domain: all real #'s  
 range:  $-12 \leq y \leq -2$   
 max y: -2  
 min. y: -12

- amplitude = 5  
 period = 12  
 vert. displ. = -3

7.  $y = 0.5\cos\left(\frac{1}{5}\left(x - \frac{\pi}{6}\right)\right) - 9$

8.  $y = 3\sin\frac{\pi}{8}(x + 4) + 6$  &  $y = 3\cos\frac{\pi}{8}(x - 0) + 6$

9.



10.

