

Assignment 3 – Review: Graphing Sin/Cos Trigonometric Functions

Name _____

For the following functions, find a) the amplitude, b) the period, c) the phase shift, d) the vertical shift.

1. $y = 2 \sin 2 \left(x + \frac{\pi}{3} \right) - 7$ a) 2 b) $\frac{4\pi}{2} = 2\pi$ c) Left $\frac{\pi}{3}$ d) Down 7

2. $y = \cos 2 \left(x - \frac{\pi}{4} \right) + 3$ a) 1 b) $\frac{2\pi}{2} = \pi$ c) Right $\frac{\pi}{4}$ d) Up 3

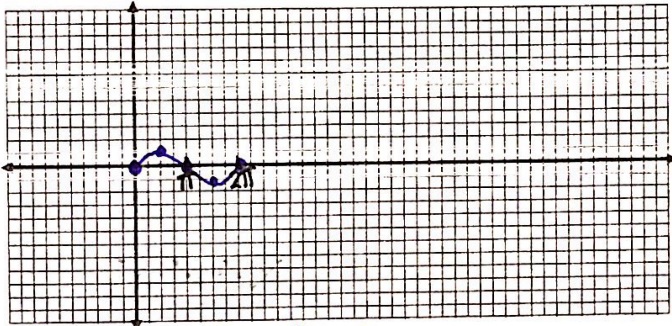
3. $y = -\sin \frac{1}{2} \left(x - \frac{\pi}{3} \right)$ a) 1 b) $\frac{2\pi}{\frac{1}{2}} = 4\pi$ c) Right $\frac{\pi}{3}$ d) NONE

4. $y = 2 \sin(x) - 5$ a) 2 b) 2π c) NONE d) DOWN 5

5. $y = -5 \cos 4 \left(x + \frac{\pi}{6} \right) + 2$ a) 5 b) $\frac{2\pi}{4} = \frac{\pi}{2}$ c) Left $\frac{\pi}{6}$ d) Up 2

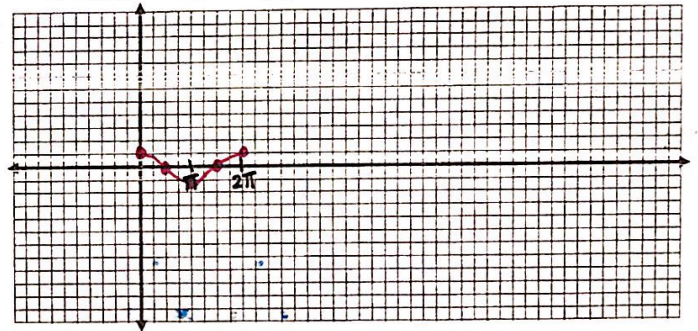
For each graph, sketch an accurate and complete graph over the domain $0 \leq x \leq 2\pi$.

6. Graph: $y = \sin(x)$



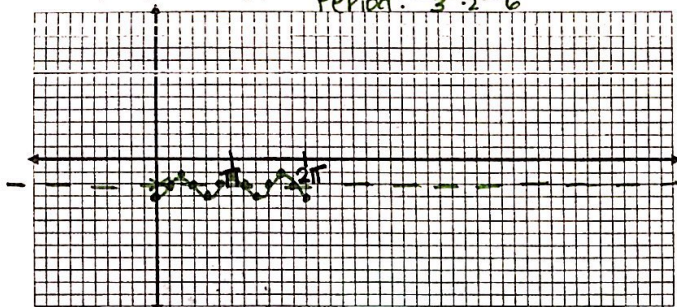
Amp: 1 Period: 2π

7. Graph: $y = \cos(x)$



Amp: 1 Period: 2π

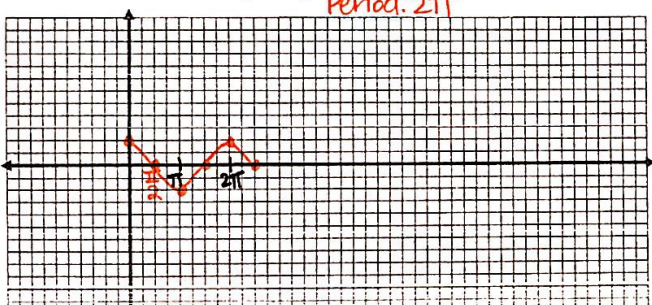
8. Graph: $y = -\cos 3(x) - 2$ Amp: 1
 Period: $\frac{2\pi}{3} \cdot 2 = \frac{4\pi}{3}$ VS: Down 2



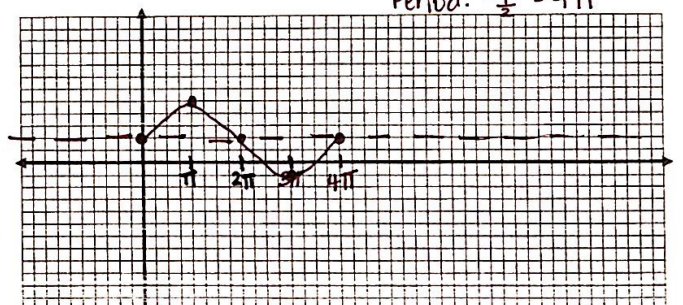
9. Graph: $y = 4 \sin(x - \pi)$ Amp: 4
 Period: 2π PS: Right π



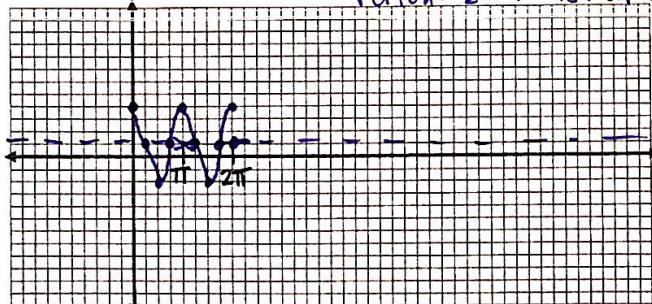
9. Graph: $y = -2 \sin(x - \frac{\pi}{2})$ Amp: 2
 Period: 2π PS: Right $\frac{\pi}{2}$



10. Graph: $y = 3 \sin \frac{1}{2}(x) + 2$ Amp: 3
 Period: $\frac{2\pi}{\frac{1}{2}} = 4\pi$ VS: Up 2



11. Graph $y = 3 \cos 2(x - \pi) + 1$ Amp: 3
 Period: $\frac{2\pi}{2} = \pi$ PS: Right π
 VS: up 1



12. Graph: $y = \cos 2(x - \frac{\pi}{3})$ Amp: 1
 Period: $\frac{2\pi}{2} = \pi$ PS: Right $\frac{\pi}{3}$

