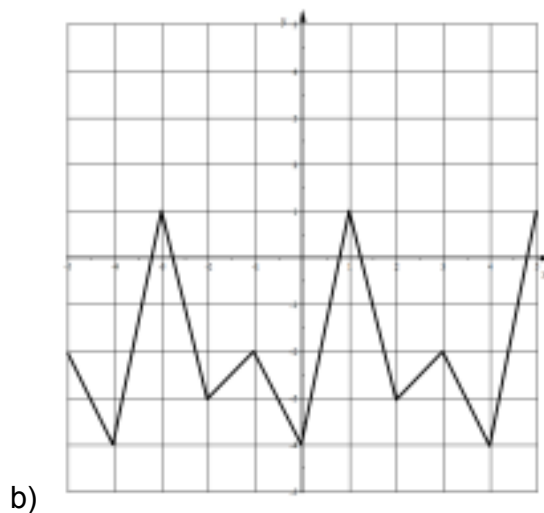
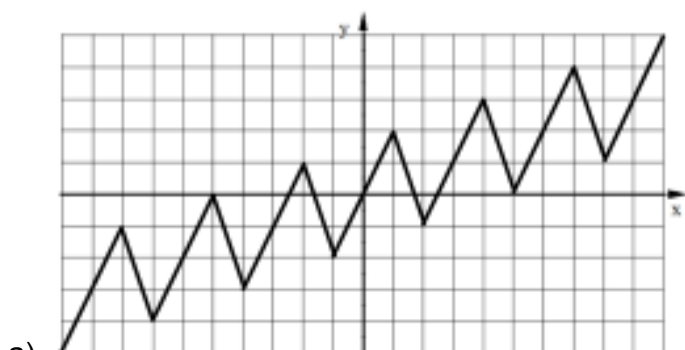


1. State if each function is periodic. If yes, state the amplitude, period, and eq for midline



2. State the amplitude and period of each function. Give the period in radians.

a) $y = 5 \sin(8x)$

b) $y = 7 \sin\left(\frac{x}{5}\right)$

3. Graph one period of each. Label the coordinates of all maximums, minimums, and points on the midline.

a) $y = 3 \sin(3x)$

b) $y = -4 \sin\left(\frac{x}{6}\right)$

4. State the Phase Shift and the equation of the midline for each function.

a) $y = 6 \sin\left(4\left(x - \frac{\pi}{4}\right)\right) + 7$

b) $y = -3 \sin\left(\frac{1}{4}(x + \pi)\right) - 2$

5. Graph one period of each. State the coordinates of all maximums, minimums, and points on the midline.

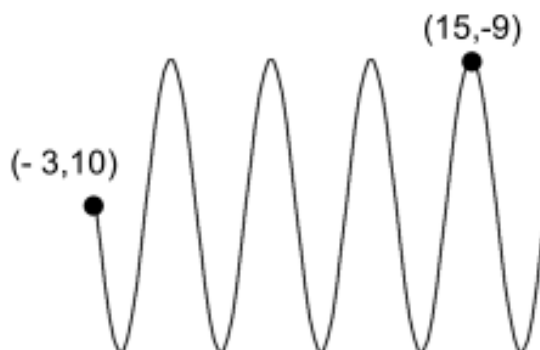
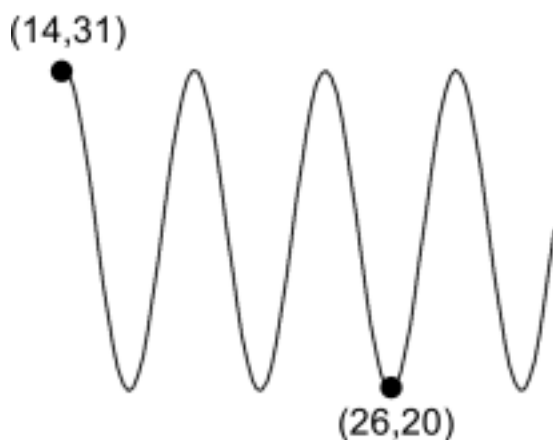
a) $y = -5 \sin\left(6\left(x - \frac{5\pi}{6}\right)\right) + 2$

b) $y = 9 \sin\left(7\left(x + \frac{\pi}{4}\right)\right) - 5$

6. Find the Period, Amplitude, and Eq of the Midline for each periodic function.

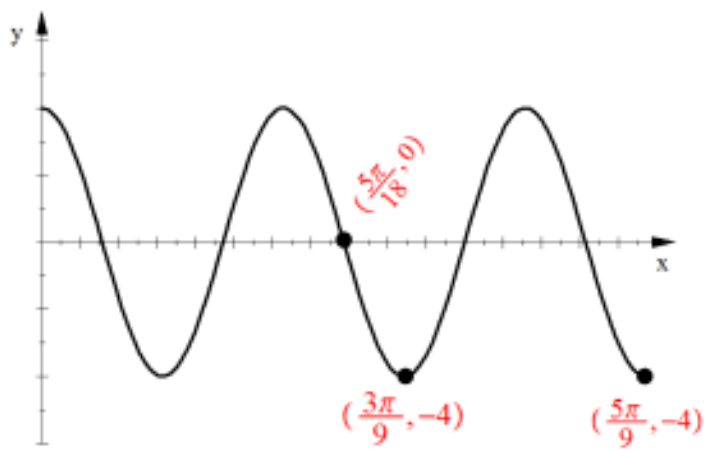
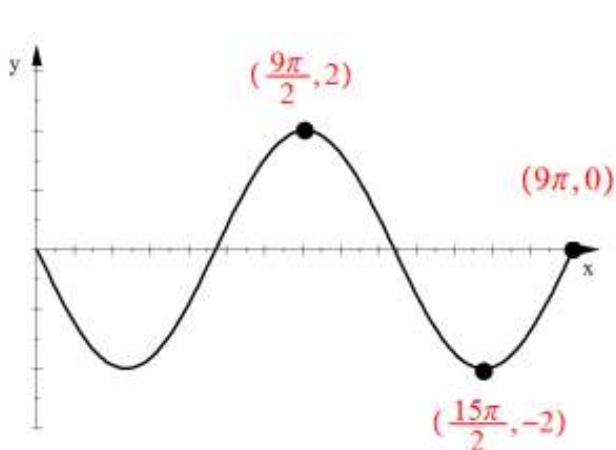
a)

b)

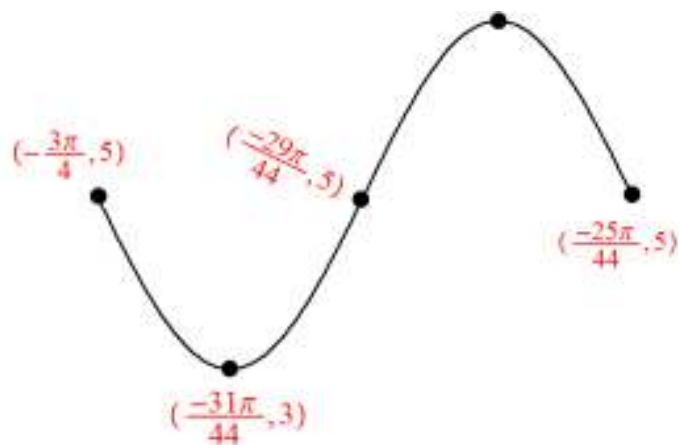


7. Write a Sin equation for this graph

8. Write a Sin equation for this graph.



9. Write a sine equation for this function.



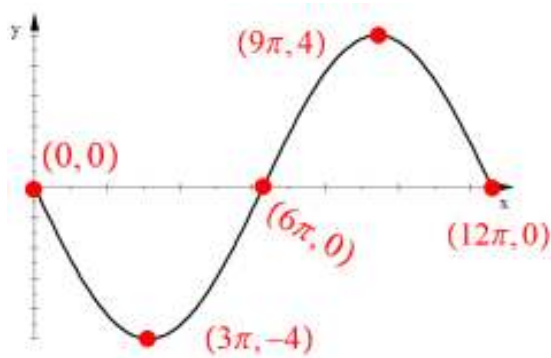
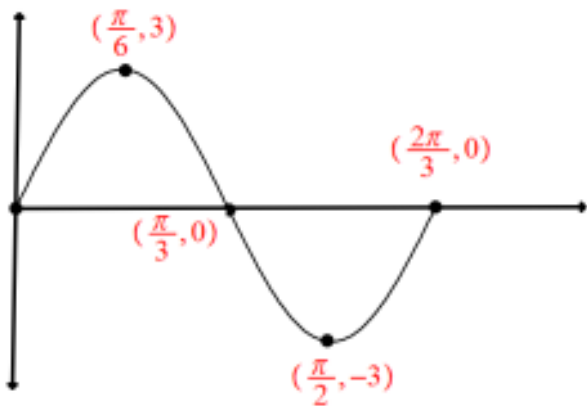
10. Sketch three cycles of a periodic function with the following characteristics:
Period = 4, Amplitude = 3, and midline: $y = -2$

Alg 2B Quiz #3 Review ANSWERS Spring 2018

1. a) Not Periodic b) Periodic. Amp= 2.5, Period= 4, Midline: $y = -1.5$

2. a) Amp= 5 Period= $\frac{\pi}{4}$ b) Amp= 7 Period= 10π

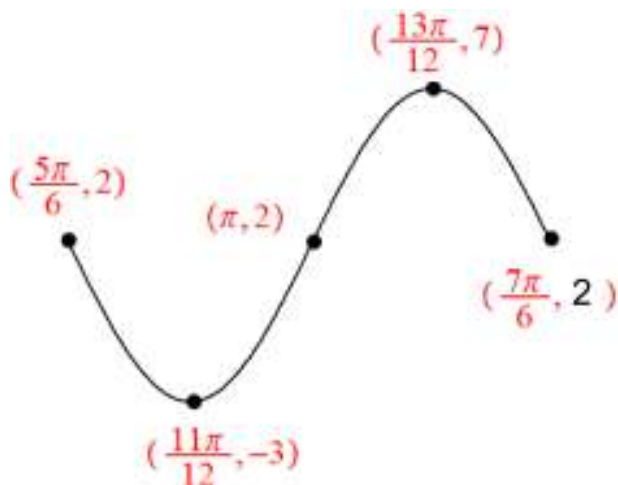
3. a) b)



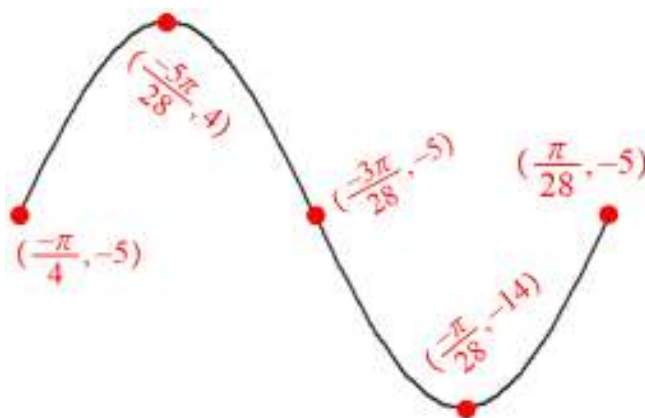
4. a) Phase Shift: $\frac{\pi}{4}$ right, Midline: $y = 7$ b) Phase Shift: π left, Midline: $y = -2$

5.

a)



b)



6. a) Period = $\frac{24}{5}$ Amplitude = 5.5 Midline: $y = 25.5$

b) Period = $\frac{24}{5}$ Amplitude = 19 Midline: $y = 10$

7. $y = -2\sin\left(\frac{x}{3}\right)$ 8. $y = -4\sin\left(9\left(x - \frac{5\pi}{18}\right)\right)$

9. Other answers are possible depending on the starting point you pick. The answer given uses the first point as a starting point.

$y = -2\sin\left(11\left(x + \frac{3\pi}{4}\right)\right) + 5$

10. There are an infinite number of possible answers, one example is shown below.

