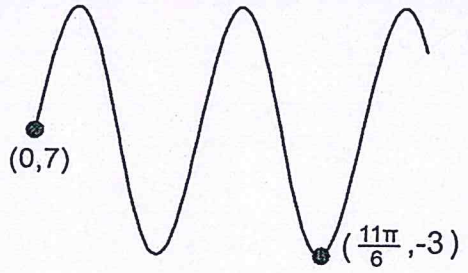
Bellwork Alg 2 Monday, April 22, 2019

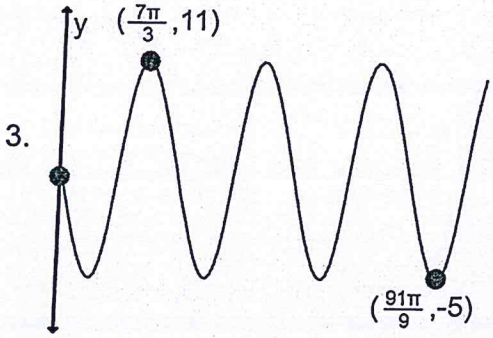
1. Sketch one period of this Sine function. Label the coordinates of all Max, Min, and points on the midline. $y = -8\sin 12x - 3$

Write the equation of each Sine graph.

2.



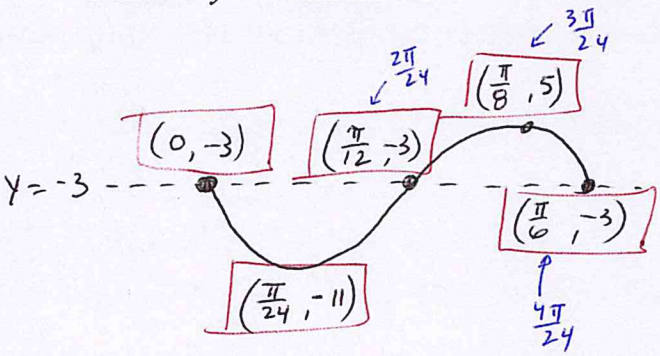
3.



Bellwork Alg 2 Monday, April 22, 2019

ANSWERS

1. Sketch one period of this Sine function. Label the coordinates of all Max, Min, and points on the midline. $y = -8\sin 12x - 3$

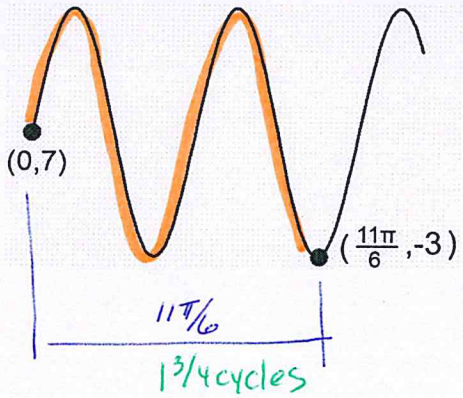


- Amplitude = 8
- upside down
- midline: $y = -3$
- period = $\frac{2\pi}{12} = \frac{\pi}{6}$

¼ period = $\frac{\pi}{6} \cdot \frac{1}{4} = \frac{\pi}{24}$

Write the equation of each Sine graph.

2.



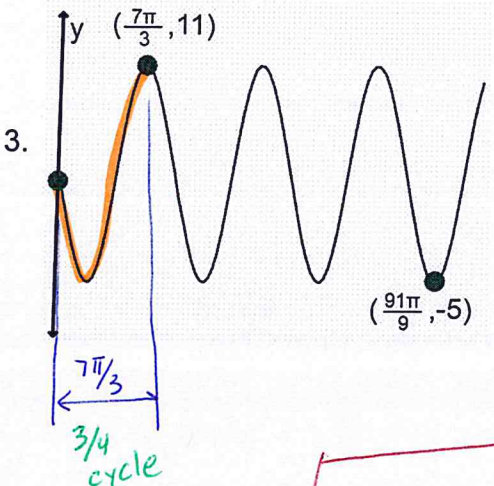
- midline: $y = 7$
- Amplitude = $7 - -3 = 10$
- NOT upside down
- period = $\frac{\frac{11\pi}{6}}{\frac{7}{4}}$

$= \frac{11\pi}{6} \cdot \frac{4}{7} = \frac{22\pi}{21}$

$y = 10\sin\frac{21x}{11} + 7$

$b = \frac{2\pi}{\frac{22\pi}{21}} = 2\pi \cdot \frac{21}{22\pi} = \frac{21}{11}$

3.



- MIDLINE: $y = \frac{11 + -5}{2} = \frac{6}{2}$: $y = 3$
- Amplitude = $\frac{11 - -5}{2} = \frac{16}{2} = 8$
- upside down
- period = $\frac{\frac{7\pi}{3}}{\frac{3}{4}} = \frac{7\pi}{3} \cdot \frac{4}{3}$

$= \frac{28\pi}{9}$

$y = -8\sin\frac{9x}{14} + 3$

$b = \frac{2\pi}{\frac{28\pi}{9}} = 2\pi \cdot \frac{9}{28\pi} = \frac{9}{14}$