Bellwork Hon Alg 2 Friday, May 19, 2017

1. Write the equation of the Sine Function with these characteristics:

Phase Shift: $\frac{\pi}{6}$ left Period = 8π Graph is upside down

Midline: $y = -3$ Amplitude = 10

EQ:

2. Use this equation: $y = 12\text{Sin}(3(x + \frac{7\pi}{10})) - 4$

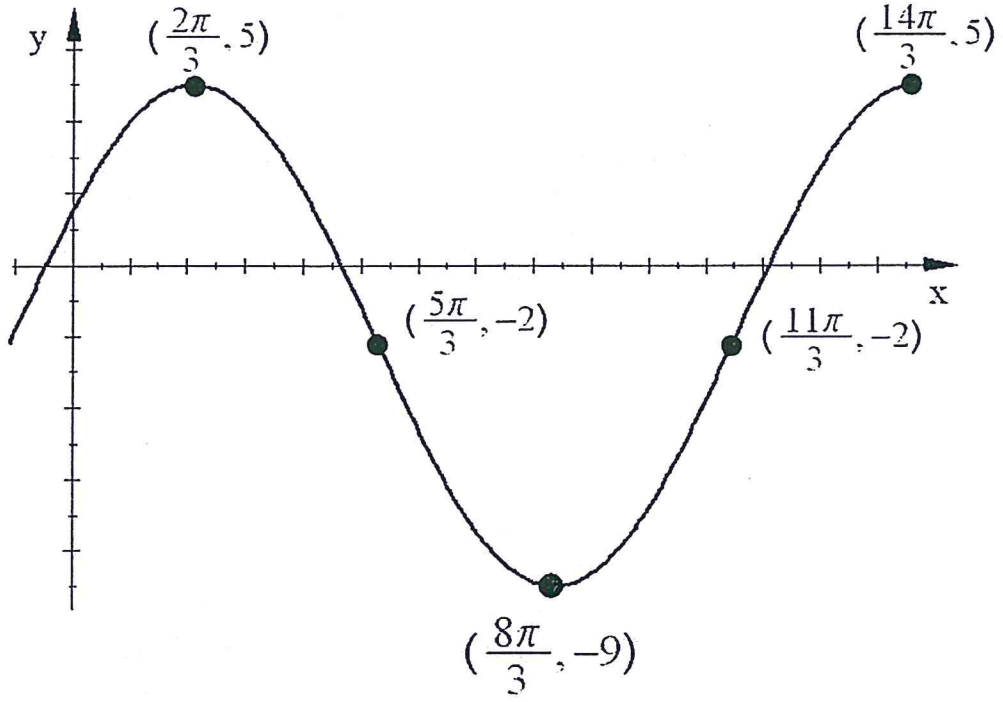
Find the following:

Amplitude: Period: Phase Shift: EQ of Midline:

3. Use the graph below to find:

Amplitude: Period: Phase Shift: EQ of Midline:

Then write a Sine equation for the graph. EQ:



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Answers

1. Write the equation of the Sine Function with these characteristics:

Phase Shift: $\frac{\pi}{6}$ left Period = 8π Graph is upside down $b = \frac{2\pi}{\text{period}}$

Midline: $y = -3$ Amplitude = 10

EQ: $y = -10\,\text{Sine}\left(\frac{1}{4}\left(x + \frac{\pi}{6}\right)\right) - 3$

$b = \frac{2\pi}{8\pi} = \frac{1}{4}$ $k = -3$

$a = -10$

2. Use this equation: $y = 12\text{Sin}(3(x + \frac{7\pi}{10})) - 4$

Find the following:

period $= \frac{2\pi}{b}$

Amplitude: 12

Period: $\frac{2\pi}{3}$

Phase Shift: $\frac{7\pi}{10}$ Left

EQ of Midline: $y = -4$

3. Use the graph below to find:

Amplitude: 7 Period: 4π $b = \frac{2\pi}{4\pi} = \frac{1}{2}$

Phase Shift: $\frac{5\pi}{3}$ RIGHT

EQ of Midline: $y = -2$

Then write a Sine equation for the graph.

EQ: $y = -7\,\text{Sin}\left(\frac{1}{2}\left(x - \frac{5\pi}{3}\right)\right) - 2$