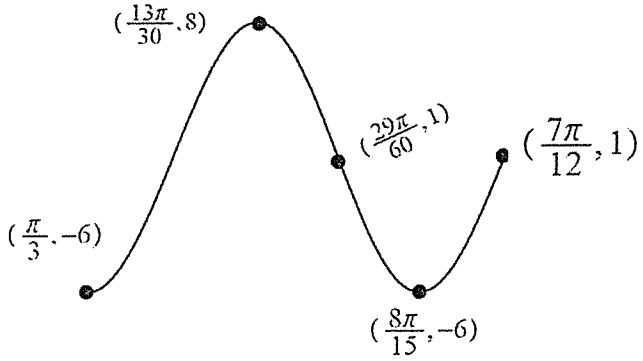
Algebra 2 Bellwork Friday, March 27, 2015

1. Find both a positive and a negative coterminal angle. Give your answer in radians. $\frac{76\pi}{13}$

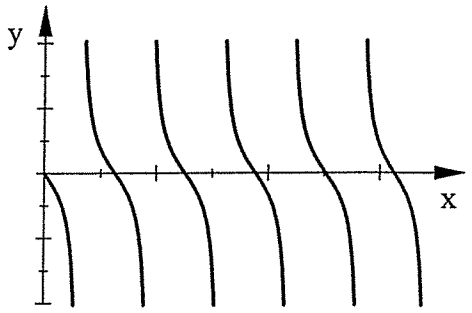
2. Graph one period of this function. Label the coordinates of all maximums, minimums, and x-intercepts.

$y = -9\text{Cos}(9(x + \frac{2\pi}{7}) - 4$

3. Write both a Sin and a Cos equation for this graph.



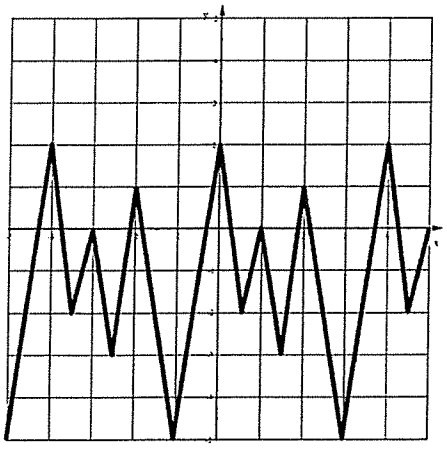
4. Write a Tangent Equation for this graph. The window is 0 to 8π



5. Find three x-intercepts and 3 VA for this Tangent Function: $y = 3\text{Tan}12x$

6. Convert this angle to radians. $276°$

7. Find the Period, Amplitude, and Eq of the Midline.



Algebra 2 Bellwork Friday, March 27, 2015 Answers

1. Find both a positive and a negative coterminal angle. Give your answer in radians. $\frac{76\pi}{13}$

Pos: $\frac{24\pi}{13}, \frac{50\pi}{13}, \frac{102\pi}{13}, \ldots$ NEG $-\frac{2\pi}{13}, -\frac{28\pi}{13}, -\frac{54\pi}{13} \ldots$

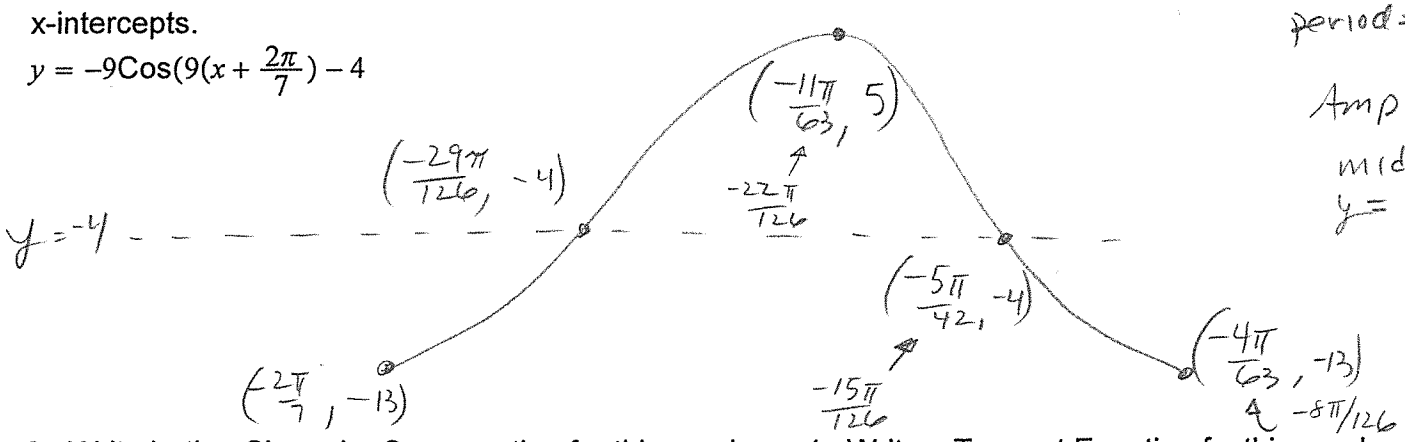
2. Graph one period of this function. Label the coordinates of all maximums, minimums, and x-intercepts.

$y = -9\text{Cos}(9(x + \frac{2\pi}{7}) - 4$

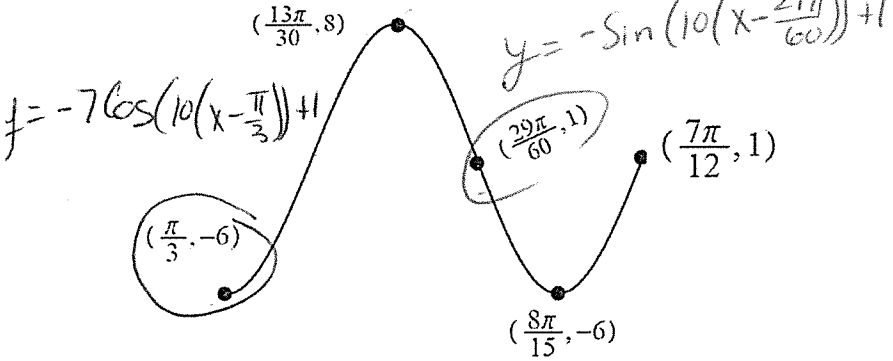
period $= \frac{2\pi}{9}$

Amp $= 9$

midline $y = -4$



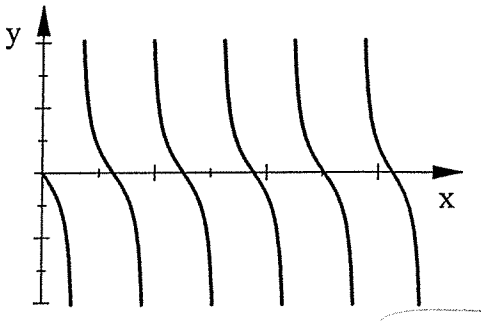
3. Write both a Sin and a Cos equation for this graph.



$y = -7\text{Cos}(10(x - \frac{\pi}{3})) + 1$

$y = -\text{Sin}(10(x - \frac{29\pi}{60})) + 1$

4. Write a Tangent Equation for this graph. The window is 0 to 8π



period $= \frac{8\pi}{11/2} = \frac{16\pi}{11}$

$b = \frac{\pi}{\frac{16\pi}{11}}$

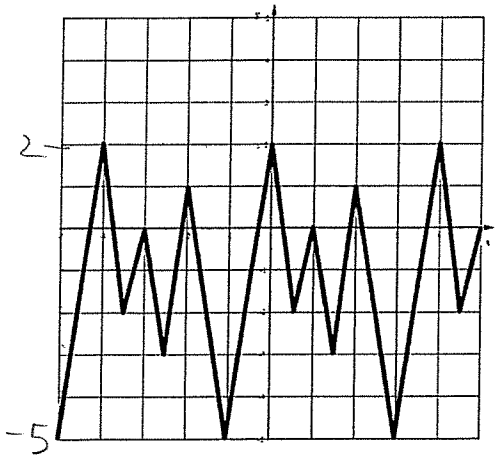
$b = \frac{11}{16}$

$y = -\text{Tan}\frac{11x}{16}$

5. Find three x-intercepts and 3 VA for this Tangent Function: $y = 3\text{Tan}12x$

6. Convert this angle to radians. 276° $276 \cdot \frac{\pi}{180} = \frac{23\pi}{15}$

7. Find the Period, Amplitude, and Eq of the Midline.

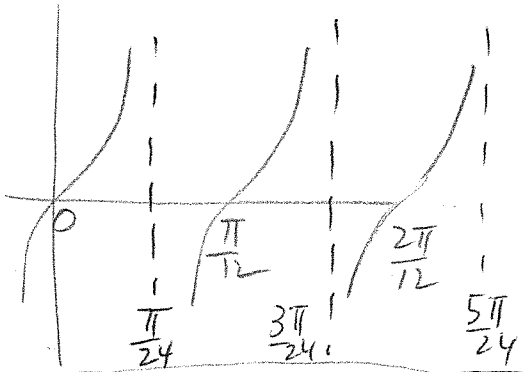


period $= 4$

Amp $= \frac{2 - -5}{2} = \frac{7}{2}$ or 3.5

midline $= \frac{2 + -5}{2} \Rightarrow y = -3/2$

period $= \frac{\pi}{12} = \frac{2\pi}{24}$



X-INT: $0, \pm\frac{\pi}{12}, \pm\frac{\pi}{6}$

VA: $\pm\frac{\pi}{24}, \pm\frac{\pi}{8}, \pm\frac{5\pi}{24}$