Aglebra 2 Bellwork Tuesday, March 17, 2015

1. Find the EXACT value of each.

a) $\text{Cos}2820°$ b) $\text{Sin}\left(\frac{-26\pi}{3}\right)$ c) $\text{Tan}\frac{41\pi}{6}$

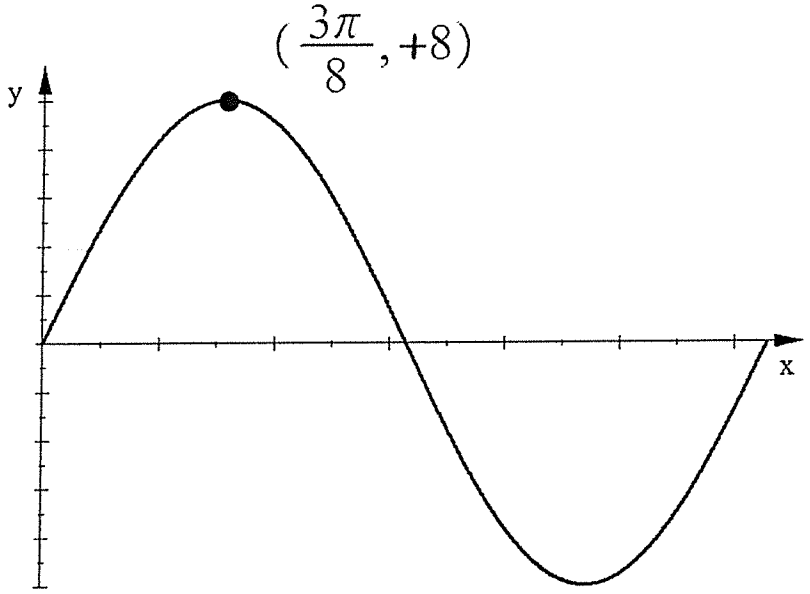
2. Tell in which quadrant or on which axis the terminal side of each angle lies.

a) $1710°$ b) $\frac{83\pi}{11}$ c) $\frac{-35\pi}{6}$

3. Graph one period of this Sine Function: $y = 9\text{Sin}\frac{5x}{8}$

Label the coorindates of all maximums, minimums, and x-intercepts.

4. Write the equation of this Sine Function:



Aglebra 2 Bellwork Tuesday, March 17, 2015 Answers

1. Find the EXACT value of each.

a) Cos2820°

$= \cos 300 = \frac{1}{2}$

b) $\sin\left(\frac{-26\pi}{3}\right)$

$= \sin\frac{4\pi}{3} = \frac{-\sqrt{3}}{2}$

c) $\tan\frac{41\pi}{6}$

$= \tan\frac{5\pi}{6} = \frac{\frac{1}{2}}{\frac{-\sqrt{3}}{2}} = -\frac{\sqrt{3}}{3}$

2. Tell in which quadrant or on which axis the terminal side of each angle lies.

a) 1710° coterminal with

$\Rightarrow 270°$

Neg y-axis

b) $\frac{83\pi}{11}$ coterminal with

$\Rightarrow \frac{17\pi}{11}$

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c) $\frac{-35\pi}{6}$ coterminal with

$\Rightarrow \frac{\pi}{6}$

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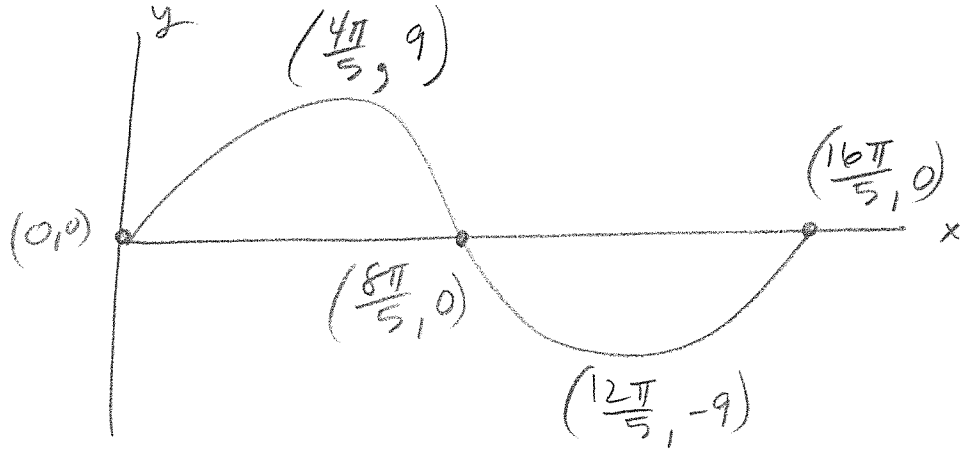
3. Graph one period of this Sine Function: $y = 9\sin\frac{5x}{8}$

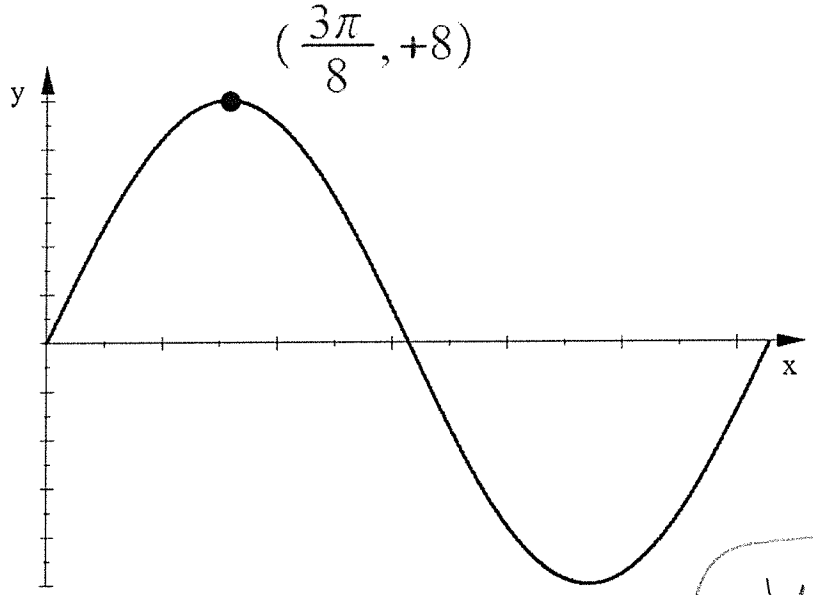
Label the coorindates of all maximums, minimums, and x-intercepts.

Amp = 9

period $\frac{2\pi}{\frac{5}{8}} = 2\pi \cdot \frac{8}{5} = \frac{16\pi}{5}$



4. Write the equation of this Sine Function:



Amp = 8 $\rightarrow$ a = 8

period $= \frac{3\pi}{8} \cdot 4 = \frac{3\pi}{2}$

$b = \frac{2\pi}{3\pi/2} = 2\pi \cdot \frac{2}{3\pi}$

$b = \frac{4}{3}$

$y = 8\sin\frac{4x}{3}$