

# Bellwork Alg 2 Thursday, May 2, 2019

1. Determine in which quadrant or on which axis the terminal side of each angle lies.

a)  $\theta = \frac{-25\pi}{2}$

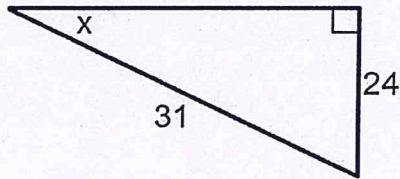
b)  $\theta = \frac{83\pi}{12}$

c)  $\theta = \frac{-47\pi}{11}$

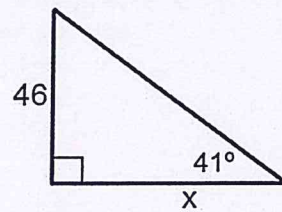
d)  $\theta = -843^\circ$

2. Find the value of x in each. Round to the nearest hundredth.

a)



b)

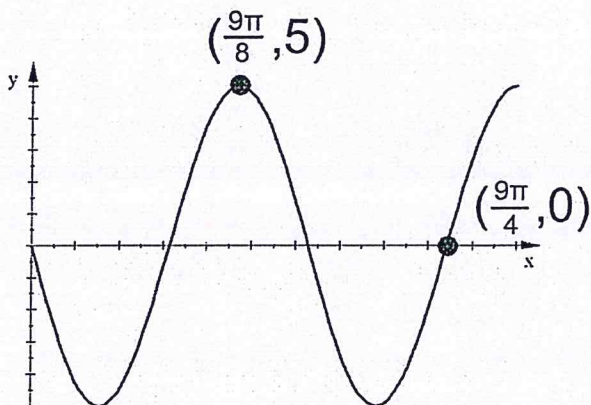


3. Convert each into the other unit of angle measure. Round angles measured in degrees to the nearest tenth if necessary. Give radian answers in reduced fractional form and in terms of  $\pi$ .

a)  $\theta = \frac{-41\pi}{48}$

b)  $\theta = 552^\circ$

4. Write an equation of this function:



1. Determine in which quadrant or on which axis the terminal side of each angle lies.

a)  $\theta = \frac{-25\pi}{2}$

COTERMINAL  
WITH  $\frac{3\pi}{2}$

NEG Y-AXIS

b)  $\theta = \frac{83\pi}{12}$

COTERMINAL  
WITH  $\frac{11\pi}{12}$   
WHICH IS BETWEEN  
 $\frac{\pi}{2}$  &  $\pi$

QUAD II

c)  $\theta = \frac{-47\pi}{11}$

COTERMINAL  
WITH  $\frac{19\pi}{11}$   
WHICH IS BETWEEN  
 $\frac{3\pi}{2}$  &  $2\pi$

QUAD IV

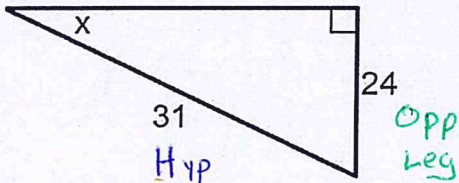
d)  $\theta = -843^\circ$

COTERMINAL WITH  $237^\circ$   
WHICH IS BETWEEN  
 $180^\circ$  &  $270^\circ$

QUAD III

2. Find the value of x in each. Round to the nearest hundredth.

a)

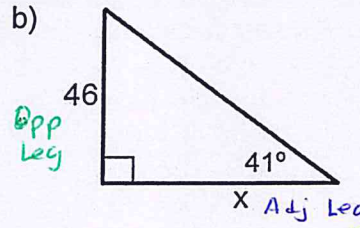


SOHCAHTOA

$$\sin X = \frac{24}{31}$$

$$X = \sin^{-1}\left(\frac{24}{31}\right) = 50.73^\circ$$

b)



SOHCAHTOA

$$\tan 41^\circ = \frac{46}{X}$$

$$X = 52.92$$

3. Convert each into the other unit of angle measure. Round angles measured in degrees to the nearest tenth if necessary. Give radian answers in reduced fractional form and in terms of  $\pi$ .

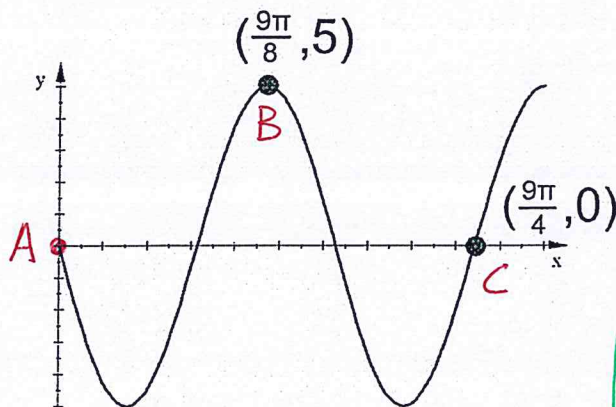
a)  $\theta = \frac{-41\pi}{48} \cdot \frac{180}{\pi}$

$$-153.8^\circ$$

b)  $\theta = 552^\circ \cdot \frac{\pi}{180}$

$$\frac{46\pi}{15}$$

4. Write an equation of this function:



Amplitude = 5

midline  $y = 0$

$$\text{period} = \frac{9\pi/4 - 0}{3/4} = \frac{9\pi}{8} \cdot \frac{4}{3} = \frac{3\pi}{2}$$

$$b = \frac{2\pi}{\frac{3\pi}{2}} = 2\pi \cdot \frac{2}{3\pi} = \frac{4}{3}$$

IF START AT A:  $y = -5 \sin \frac{4x}{3}$

IF START AT B:  $y = 5 \cos\left(\frac{4}{3}\left(x - \frac{9\pi}{8}\right)\right)$

IF START AT C:  $y = 5 \sin\left(\frac{4}{3}\left(x - \frac{9\pi}{4}\right)\right)$