

1. Is this pair of angles coterminal? $\frac{19\pi}{13}$ and $\frac{175\pi}{13}$

2. In which quadrant or on which axis will the terminal side of each angle be located?

a) $\frac{59\pi}{9}$

b) 2700°

c) $\frac{31\pi}{2}$

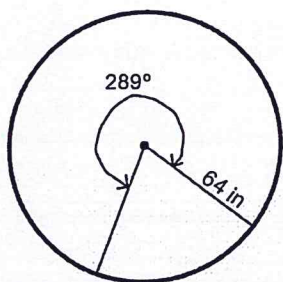
d) -1245°

3. Convert each angle to other unit measure. Round degrees to the nearest hundredth and leave radians in terms of π and reduce.

a) $\frac{11\pi}{16}$

b) 115°

4. Find the length of the indicated arc. Round to the nearest hundredth.



1. Is this pair of angles coterminal? $\frac{19\pi}{13}$ and $\frac{175\pi}{13}$

$$\frac{175\pi}{13} - \frac{19\pi}{13} = \frac{156\pi}{13} = 12\pi$$

YES

This is a multiple of 2π which means they ARE coterminal

2. In which quadrant or on which axis will the terminal side of each angle be located?

a) $\frac{59\pi}{9}$
coterminal with $\Rightarrow \frac{5\pi}{9}$

Quad II

b) 2700°

$\Rightarrow 180^\circ$

Neg X-axis

c) $\frac{31\pi}{2}$

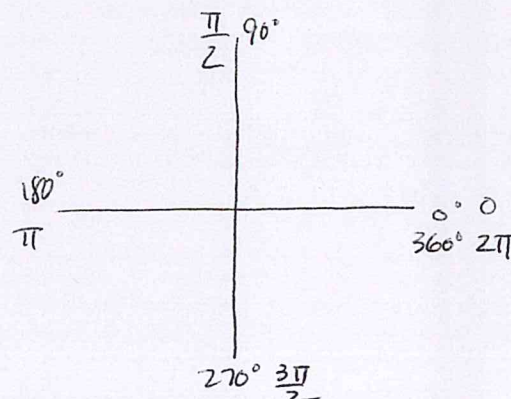
$\Rightarrow \frac{3\pi}{2}$

Neg y-axis

d) -1245°

$\Rightarrow 195^\circ$

Quad III



3. Convert each angle to other unit measure. Round degrees to the nearest hundredth and leave radians in terms of π and reduce.

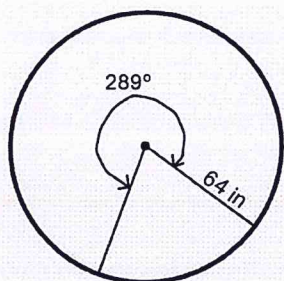
a) $\frac{11\pi}{16} \cdot \frac{180^\circ}{\pi}$

123.75°

b) $115^\circ \cdot \frac{\pi}{180} \div 5$

$\frac{23\pi}{36}$

4. Find the length of the indicated arc. Round to the nearest hundredth.



$S = \theta \cdot r$

$\left(289^\circ \cdot \frac{\pi}{180^\circ}\right) (64 \text{ in})$
radian measure of angle radius

$S = 322.82 \text{ in}$