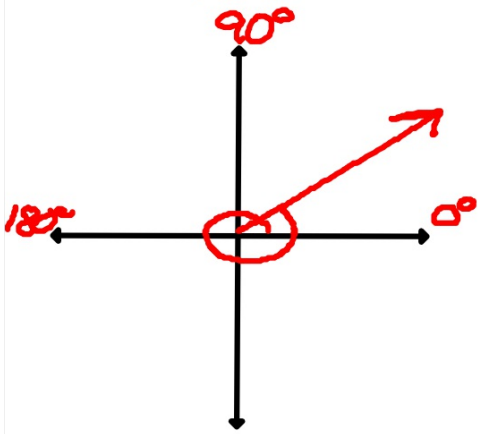
April 25, 2012

Alg2

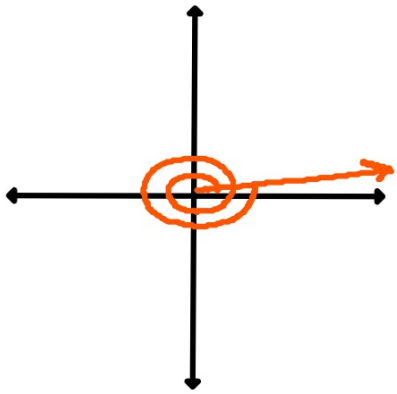
Get out your homework

4/25 - Angle of Rotation and Radian Measure

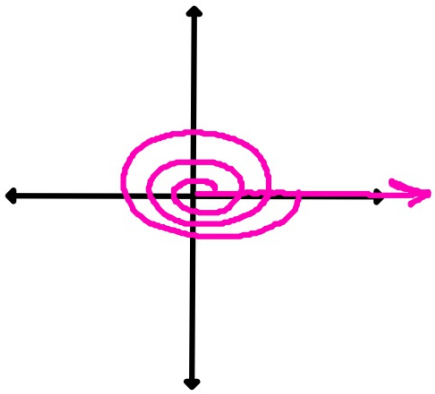
400°



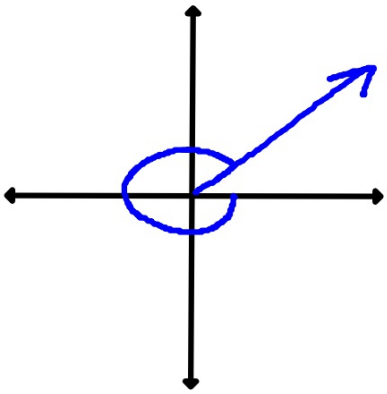
725°



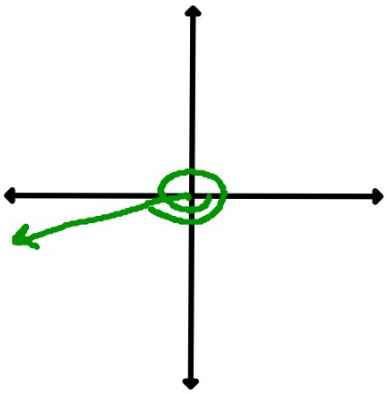
1080°



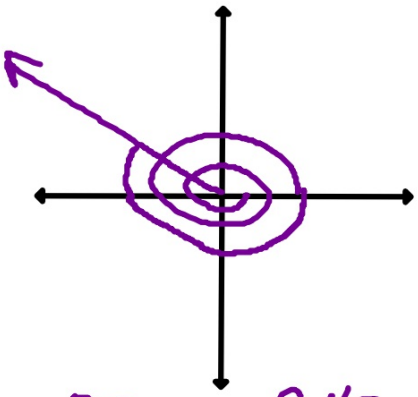
-315°



-520°



-945°



$$\begin{array}{r} 360 \\ 360 \\ \hline 720 \end{array} \qquad \begin{array}{r} 945 \\ -720 \\ \hline 225 \\ -180 \\ \hline 45 \end{array}$$

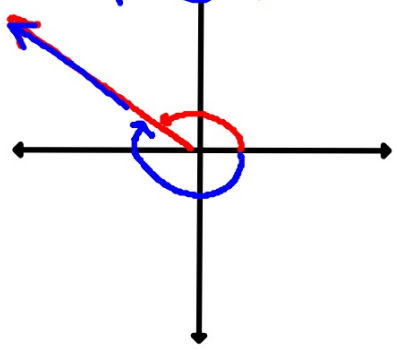
Two angles are "coterminal" if

ends together

Are the given pairs of angles coterminal?

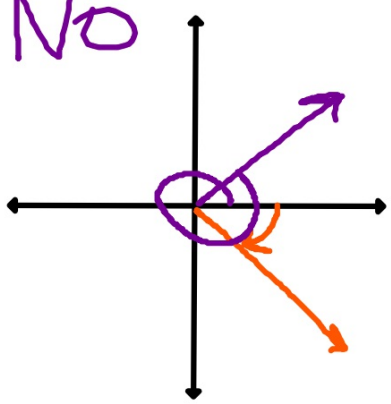
135° -225°

Yes!



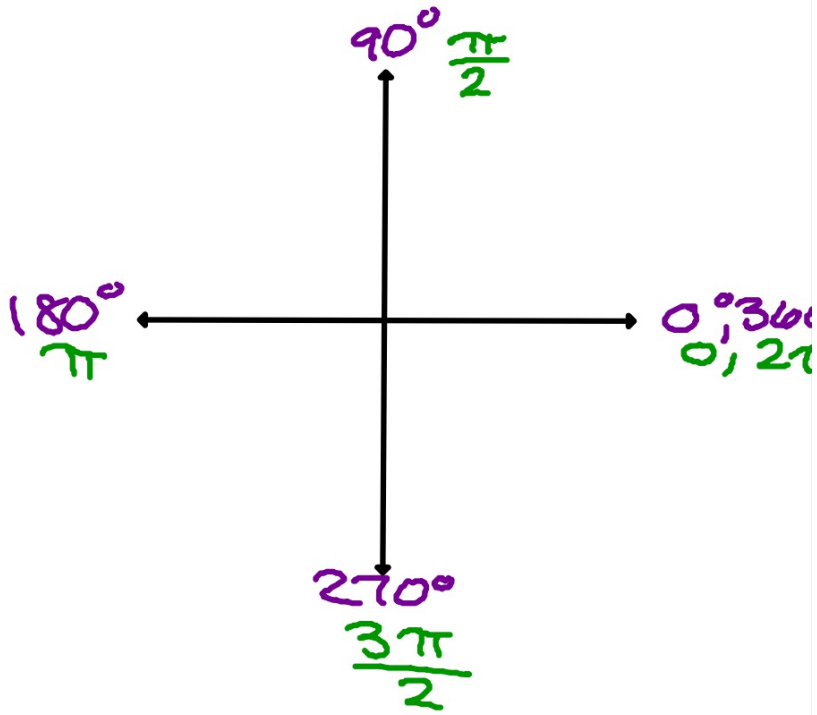
-42° 402°

No



Radian measure:

$$180^o = \pi$$



To convert between radians and degrees, use a unit fraction:

$$\frac{180^o}{\pi} \quad \text{or} \quad \frac{\pi}{180^o}$$

Convert to radians:

$$\frac{\cancel{60^o}}{1} \cdot \frac{\pi}{\cancel{180^o}} = \frac{\pi}{3}$$

$$-\cancel{100^o} \cdot \frac{\pi}{\cancel{180^o}} = -\frac{5\pi}{9}$$

Convert to degrees:

$$\frac{\cancel{\pi}}{4} \cdot \frac{180^o}{\cancel{\pi}} = 45^o$$

$$\frac{5\cancel{\pi}}{\cancel{6}} \cdot \frac{\cancel{180^o}}{\cancel{\pi}} = 150^o$$

Complementary angles add up to 90° or $\frac{\pi}{2}$

Supplementary angles

Find the complement of each:

17° $\frac{3\pi}{10}$

Find the supplement of each:

62° $\frac{5\pi}{8}$

Homework

Pg 689 #8-62 evens

Due Tuesday