Math-3 Handout 6-3

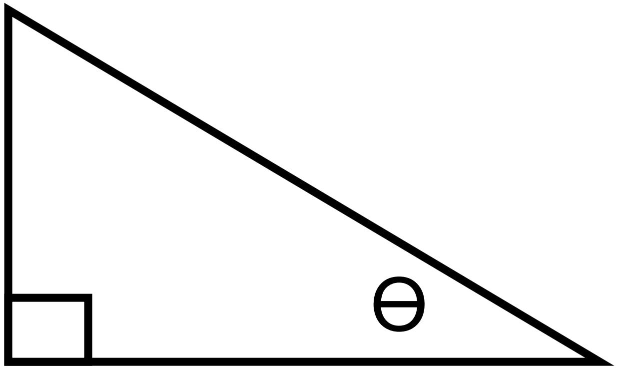
A typical co-terminal angle problem: Find a positive and negative angle that is *co-terminal* with

$m\angle\theta = 240$

$m\angle\theta = -100$

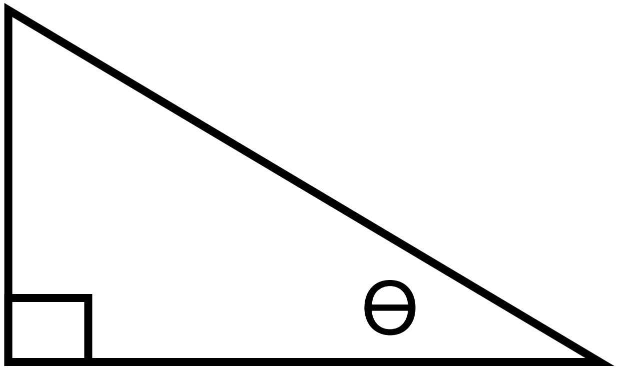
$\tan\theta = {}^{1}/_{5}$ $\theta = ?$

Draw and label a right triangle:



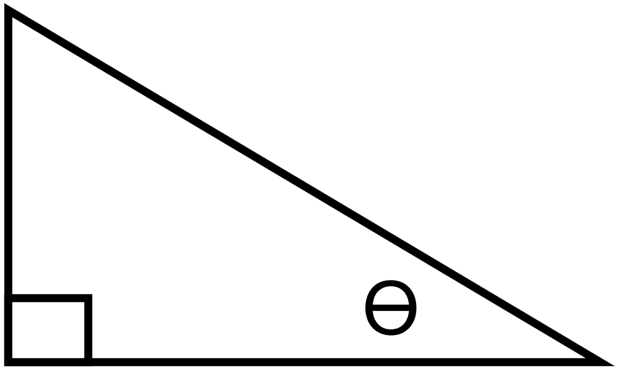
$\sec\theta = {}^{5}/_{2}$ $\theta = ?$

Draw and label a right triangle:



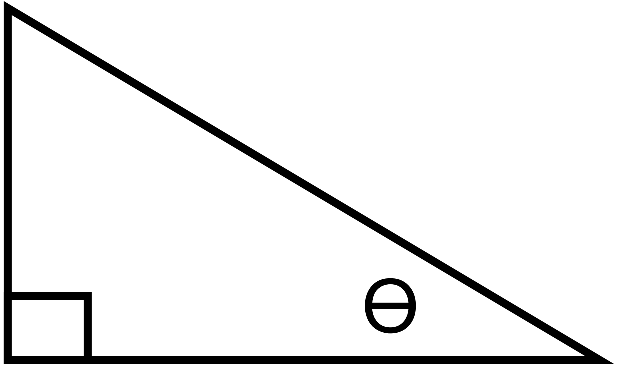
$\tan\theta = {}^{4}/_{9}$ $\cos\theta = ?$

Draw and label a right triangle:

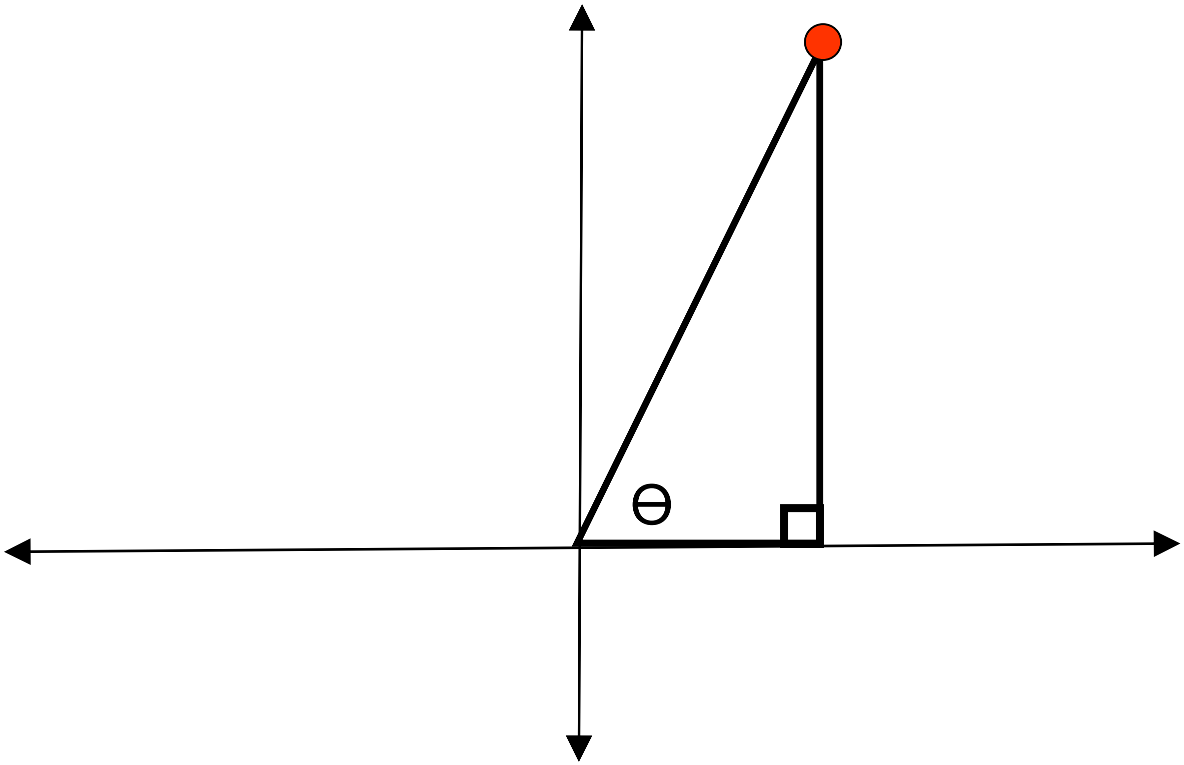


$\sec\theta = {}^{4}/_{9}$ $csc\,\theta = ?$

Draw and label a right triangle:

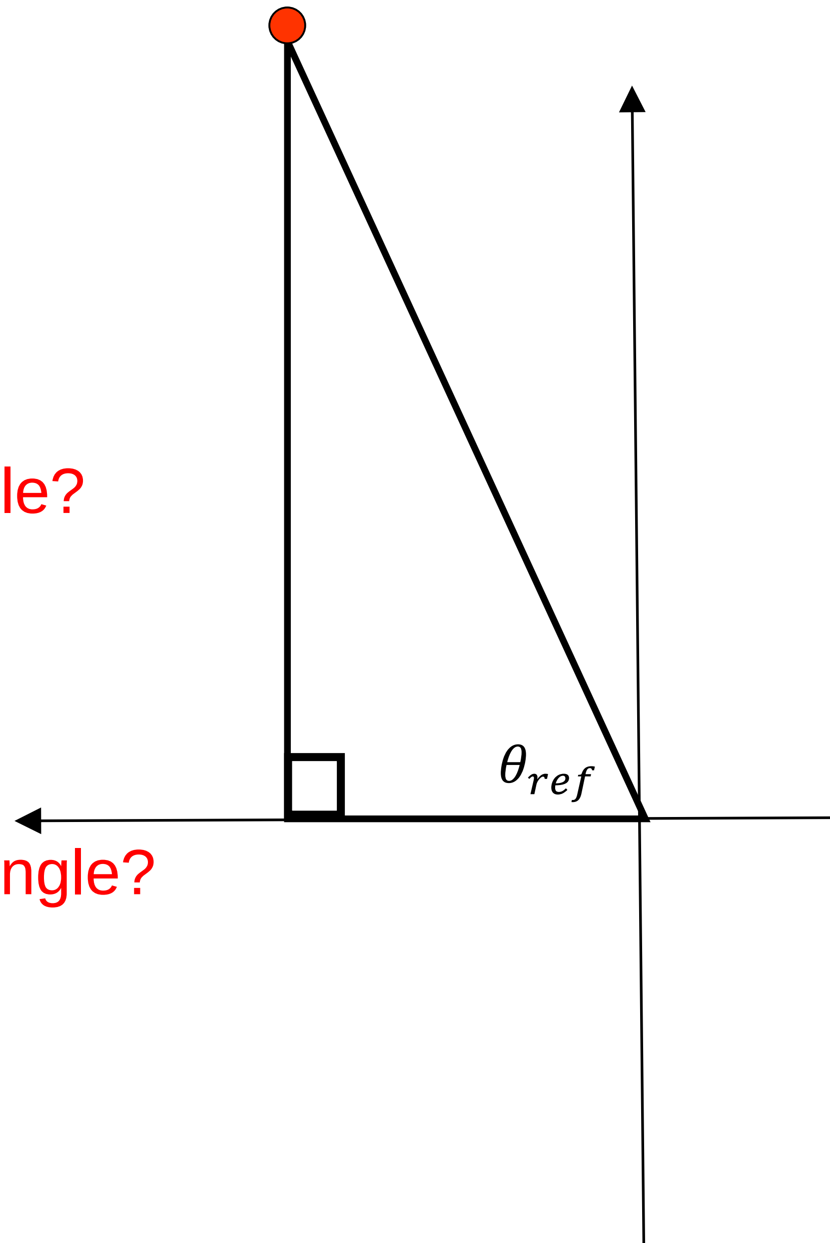


What is the sine ratio of a standard position angle whose terminal side passes through the point (2, 7)?



What is measure of the angle?

What is the cosine ratio of an angle whose terminal side passes through the point (-1, 3)?



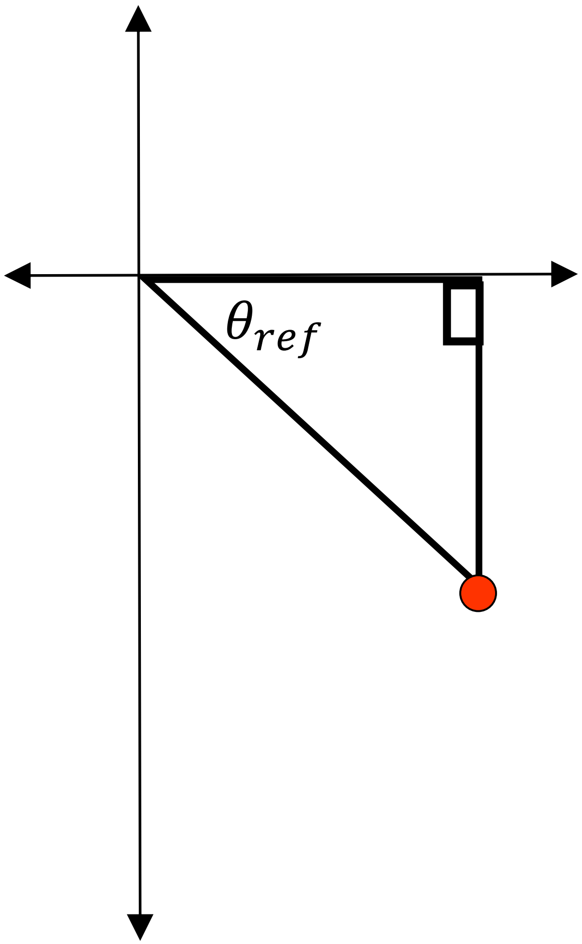
What is measure of the reference angle?

What is measure of the std. position angle?

What is the sine ratio of an angle whose terminal side passes through the point (4, -3)?

What is measure of the reference angle?

What is measure of the std. position angle?



Convert between radians and degrees using a "proportion".

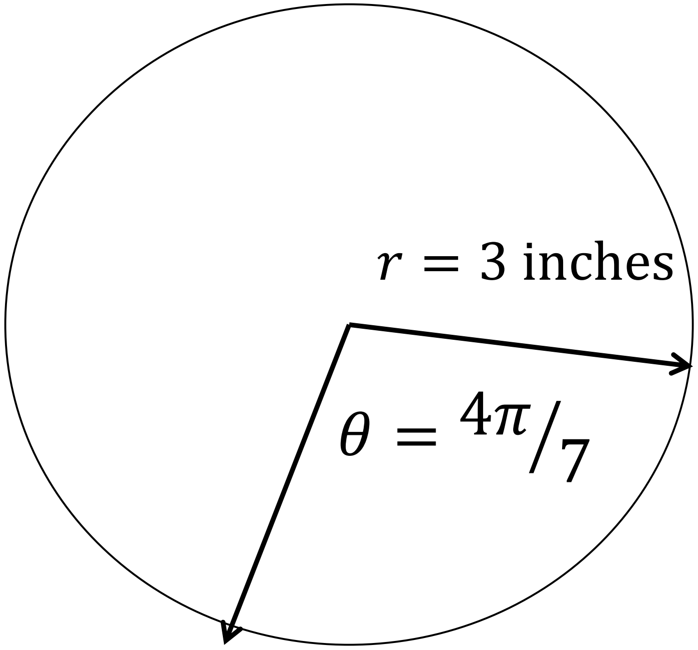
$$\boxed{\frac{angle_{degrees}}{360} = \frac{angle_{radians}}{2\pi}}$$

$\frac{3}{8}\pi$

$125°$

$$\frac{\text{part}}{\text{whole}_{(\text{arc lengths})}} = \frac{\text{part}}{\text{whole}_{(\text{angles})}}$$

$$\frac{s}{2*\pi*r} = \frac{\theta}{360 \text{ or } 2\pi}$$

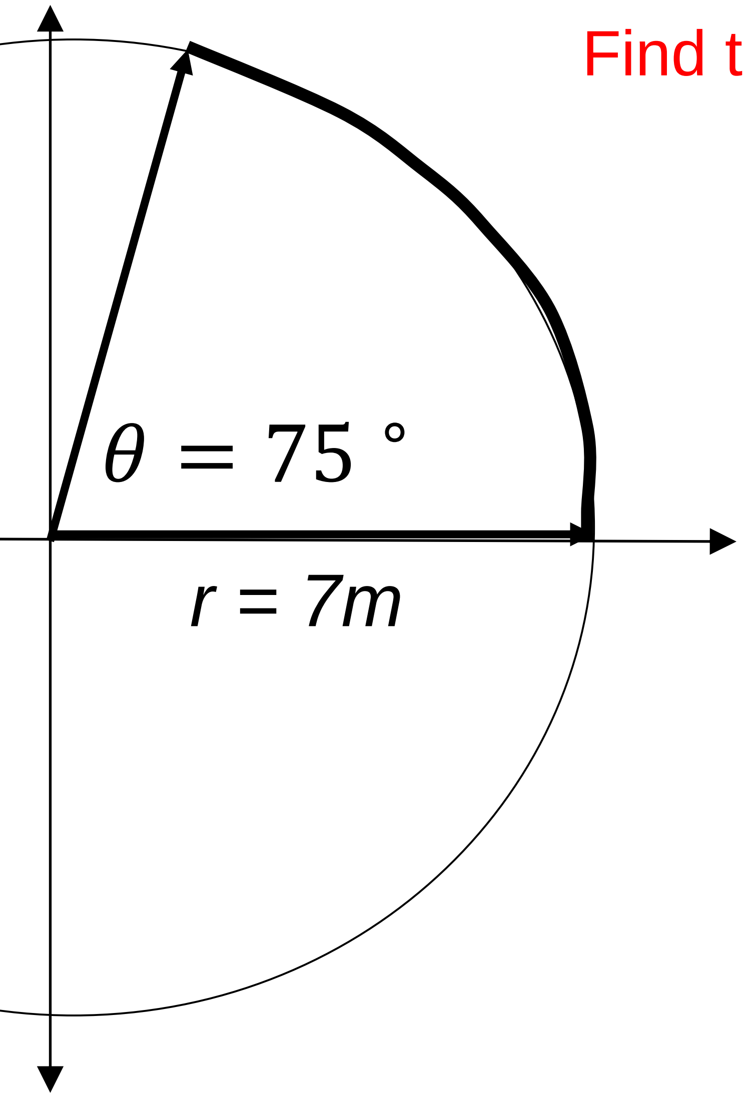


Find the length of the subtended arc.

$$\frac{\text{part}}{\text{whole}_{(\text{areas})}} = \frac{\text{part}}{\text{whole}_{(\text{angles})}}$$

$$\frac{A_{sector}}{\pi * r^2} = \frac{\theta}{360 \text{ or } 2\pi}$$

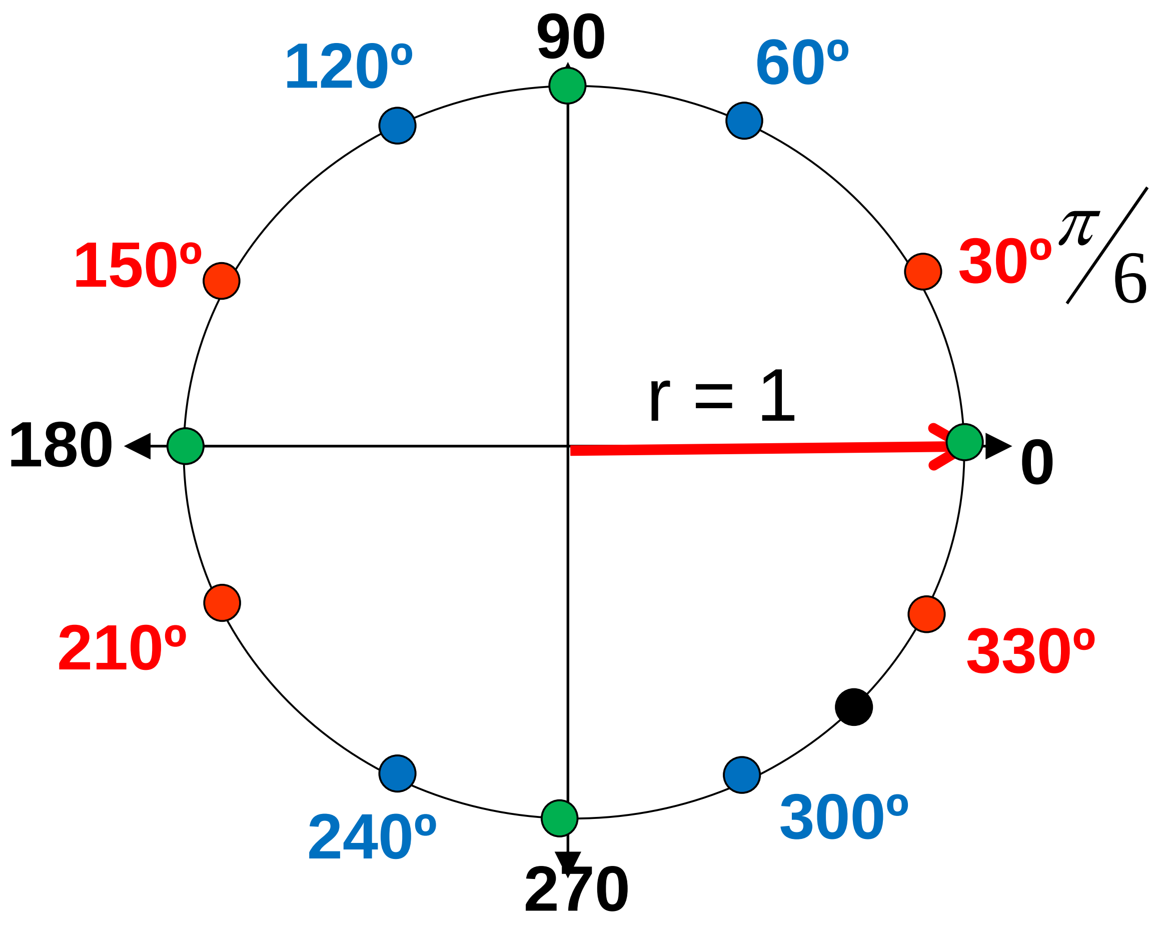
Find the area of the sector.



$$30^\circ * \left(\frac{\pi}{180^o}\right) = \left(\frac{30^\circ \pi}{180^o}\right)$$

Label each standard position angle measure in radians.

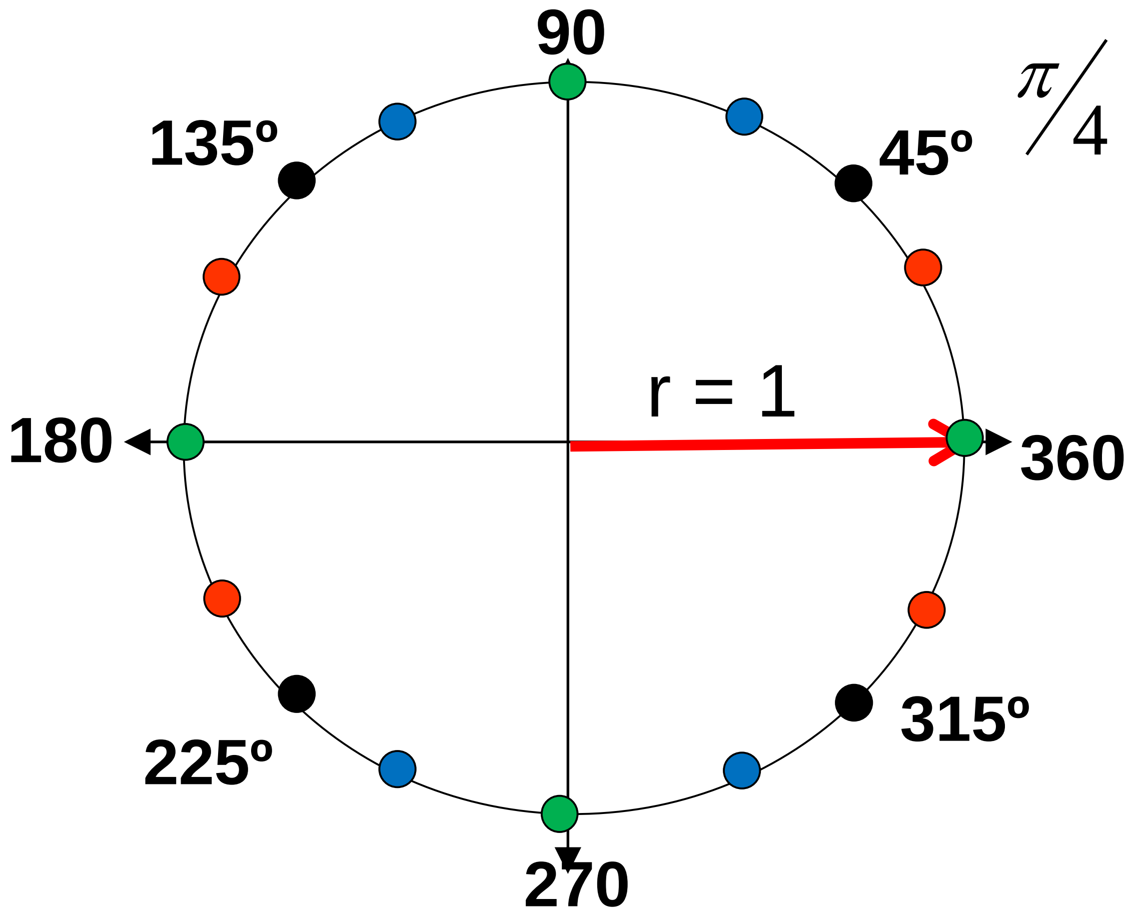
$$30^\circ = \frac{\pi}{6}$$



$$45^\circ * \left(\frac{\pi}{180^o}\right) = \left(\frac{45^\circ \pi}{180^o}\right)$$

Label each standard position angle measure in radians.

$$45^\circ = \frac{\pi}{4}$$



$$90° * \left(\frac{\pi}{180^o} \right) = \left(\frac{90^\circ \pi}{180^o} \right)$$

Label each standard position angle measure in radians.

$$90^\circ = \frac{\pi}{2}$$

$$\pi/2$$