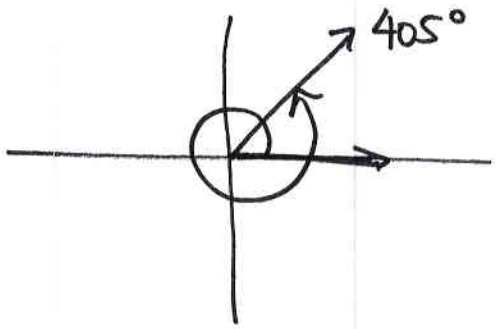
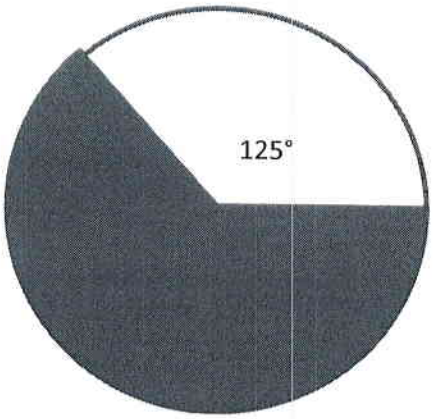
Math 1149, Quiz #1, Fall 2013 Name KEY

Instructions: Show all work. Give exact answers unless specifically asked to round.

1. Draw a picture of the angle 405° in standard position.



2. If you have a sector of a circle as shown below subtending an angle of 125°, find the arc length on the perimeter, and the area of the sector. Suppose that the radius of the circle is 6 meters.



$125^\circ \cdot \frac{\pi}{180^\circ} = \frac{25}{36}\pi = \theta$

$s = r\theta = 6\left(\frac{25}{36}\pi\right) = \frac{25}{6}\pi \approx 13.09\text{ m.}$

$A = \frac{1}{2}\theta r^2 = \frac{1}{2}\left(\frac{25}{36}\pi\right)(6)^2 = \frac{25}{2}\pi$

$\approx 39.27\text{ m}^2$