AAT

More Angles

degrees → radians

angle $\cdot \frac{\pi}{180}$

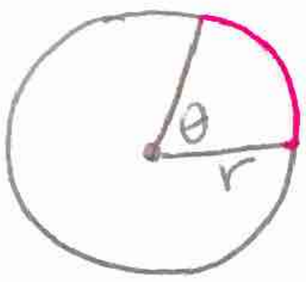
radians → degrees

angle $\cdot \frac{180}{\pi}$

ex convert

a) $72^\circ\left(\frac{\pi}{180}\right) = \frac{2\pi}{5}$ b) $\frac{\pi}{7}\left(\frac{180}{\pi}\right) = 25.7^\circ$ c) $-215^\circ\left(\frac{\pi}{180}\right) = \frac{43\pi}{36}$

arc length



$s = r\theta$

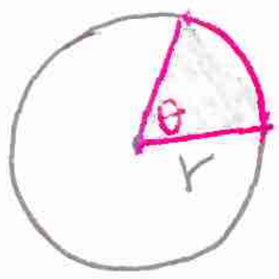
* θ must be in radians

ex2 $r = 5$ in, $\theta = 60^\circ$

$60^\circ\left(\frac{\pi}{180}\right) = \pi/3$

$s = 5(\pi/3) = \boxed{5\pi/3 \text{ in}}$

sector area



$s = \frac{1}{2}r^2\theta$

* θ must in radians

ex3 $r = 4$ $\theta = \pi/5$

$s = \frac{1}{2}(4)^2(\pi/5)$

$s = \boxed{1.6\pi}$