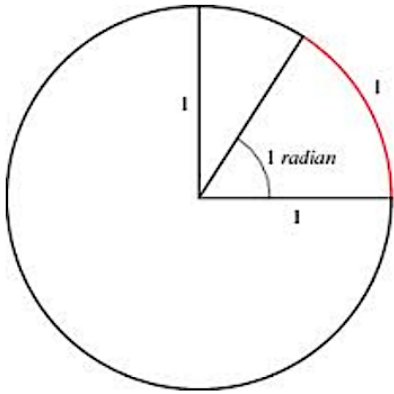


**3.4 Radian Measure**

Watch this video titled ["What are Radians?"](#)



- Angles can also be measured in \_\_\_\_\_.
- One radian is the measure of an angle in \_\_\_\_\_ whose terminal side intercepts an \_\_\_\_\_ of length \_\_\_\_\_.
- Since the circumference of a circle is \_\_\_\_\_, there are \_\_\_\_\_ radians in a full circle of radius 1.

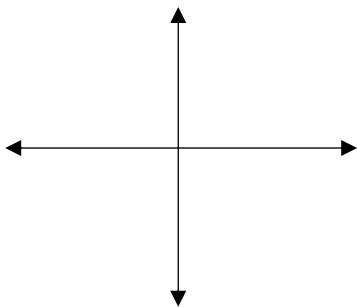
$360^\circ = \text{\_\_\_\_\_\_} \textit{radians}$	$180^\circ = \text{\_\_\_\_\_\_} \textit{radians}$
--	--

**Converting between Degrees and Radians**

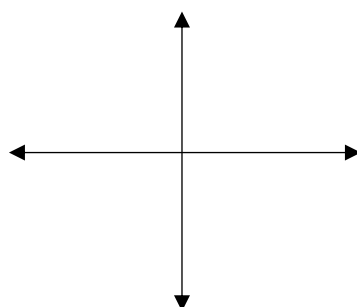
<b>Degrees to Radians</b>	<b>Radians to Degrees</b>
---------------------------	---------------------------

Sketch the angle in standard position. Then convert the following degrees into radians.

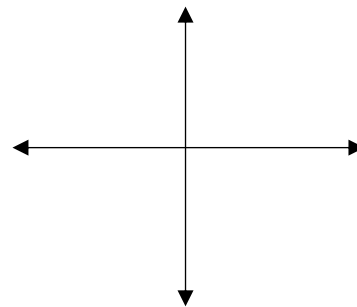
a)  $300^\circ$



b)  $145^\circ$



c)  $-970^\circ$

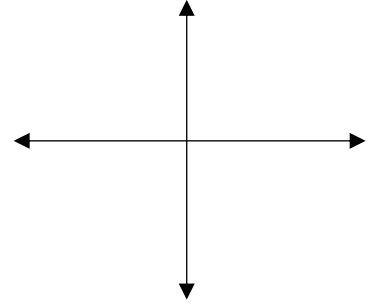
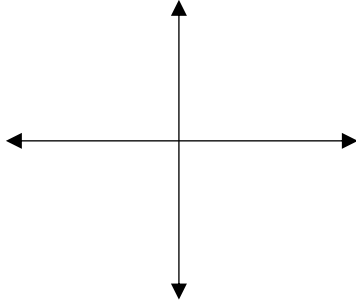
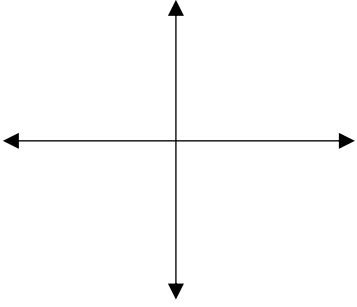


Sketch the angles in standard position. Then convert the following radians into degrees.

a)  $\frac{\pi}{6}$

b)  $3\pi$

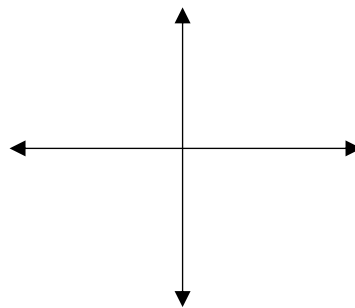
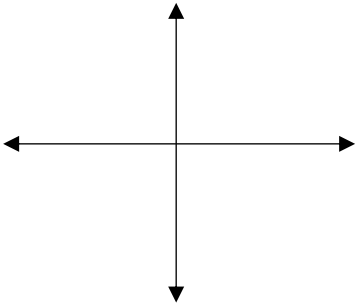
c)  $-\frac{5\pi}{4}$



Sketch each given angle in standard position. Then find 3 angles that are coterminal (one must be negative) and the reference angle.

a)  $\frac{11\pi}{6}$

b)  $\frac{4\pi}{9}$



c)  $-\frac{3\pi}{4}$

e)  $\frac{2\pi}{3}$

