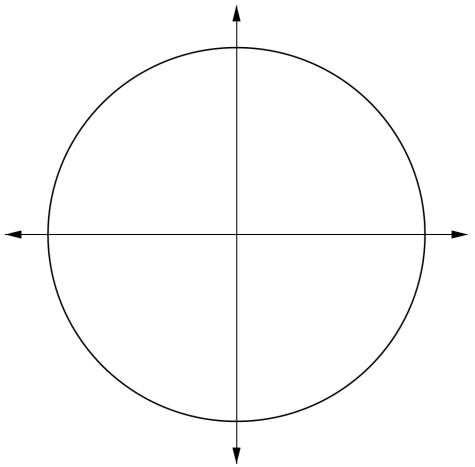
Section 13 – Topic 3
The Radian Measure – Part 1

When measuring angles in radians, one rotation around the circle ($360°$) is equivalent to _____ radians.



What is the radian measure at $180°$? Label it on the circle.

What is the radian measure at $90°$? Label it on the circle.

What is the radian measure at $270°$? Label it on the circle.

How can we convert degrees to radians?

How can we convert radians to degrees?

Let's Practice!

1. Convert $150°$ into radians.

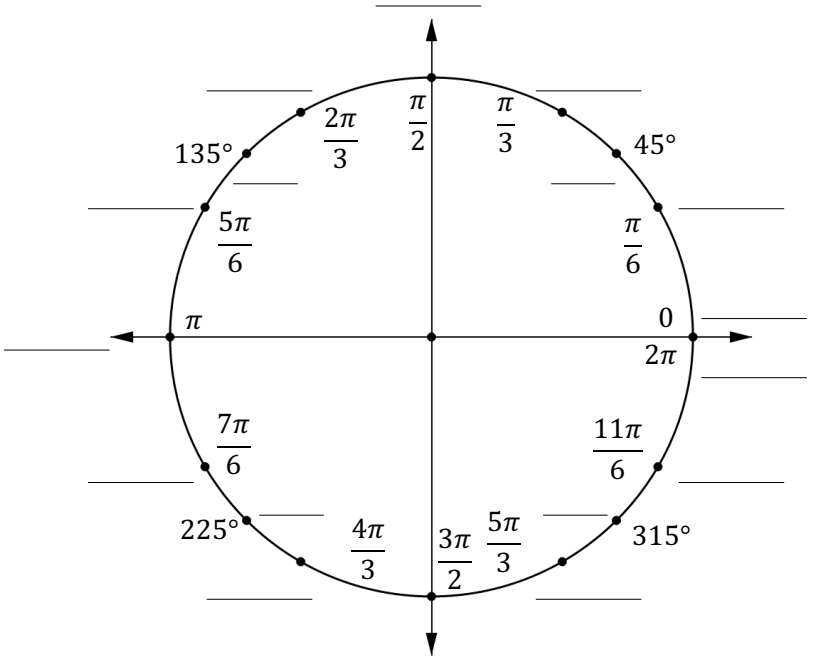
2. Convert $-\frac{3\pi}{4}$ into degrees.

Try It!

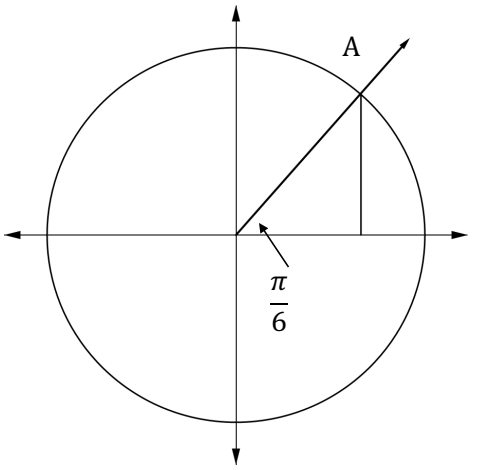
3. Convert $-225°$ into radians.

4. Convert $\frac{7\pi}{6}$ into degrees.

Complete the unit circle by providing the missing angle measures (both degrees and radians).



Consider the unit circle diagram below.



Evaluate $\sin\frac{\pi}{6}$.

Evaluate $\cos\frac{\pi}{6}$.

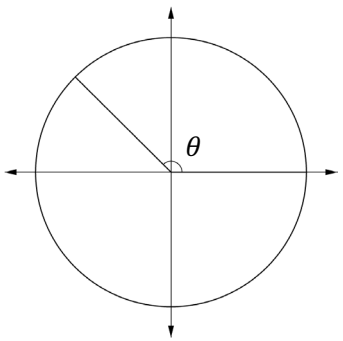
Determine the coordinates of A.

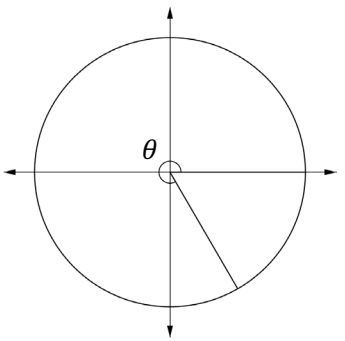
Section 13 – Topic 4
The Radian Measure – Part 2

A ***reference angle*** is an _____ angle formed by the terminal side of a given angle and the _____.

Reference triangles can be used to evaluate the trigonometric values of an angle whose terminal side is not in Quadrant _____.

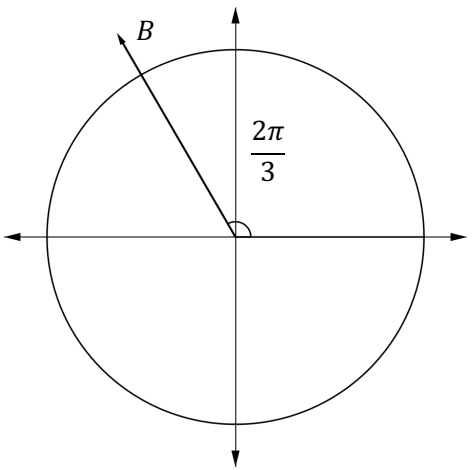
Consider the diagrams below. Draw the reference triangles that we could use to find the trigonometric functions for $\angle\theta$.





***Let's Practice*!**

1. Consider the unit circle diagram below.



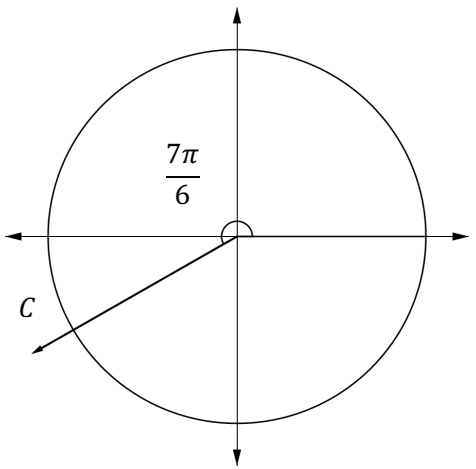
a. Evaluate $\sin\frac{2\pi}{3}$.

b. Evaluate $\cos\frac{2\pi}{3}$.

c. Find the coordinates of B.

Try It!

2. Consider the unit circle diagram below.



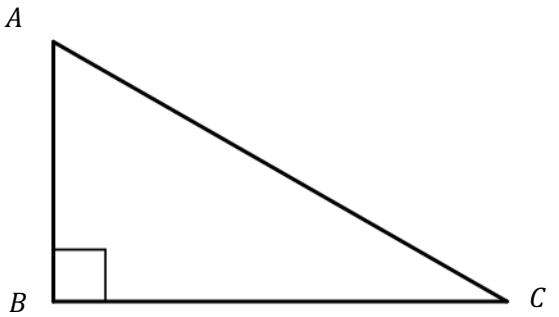
a. Evaluate $\sin\frac{7\pi}{6}$.

b. Evaluate $\cos\frac{7\pi}{6}$.

c. Find the coordinates of C.

BEAT THE TEST!

1. In ΔABC, $m\angle BAC = 60°$ and $AC = 1$ unit.



Draw triangles in Circle A to show how ΔABC can be placed in the circle to illustrate $\sin(\theta)$, where $\theta = \pm\frac{\pi}{3} \pm n\pi$ for $n = 0$ and $n = 1$.