Name: _____

Chapter 7 - Section 7.2 The Sine and Cosine Functions

TICKET-IN-THE-DOOR

In order to be prepared for class you must watch the module and complete the following activity. This is due first thing when you get to class.

The unit circle has a radius of ____unit.

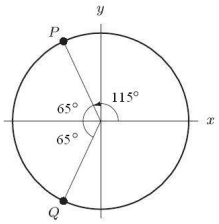
Suppose $P = (x, y)$ is a point on the unit circle defined by θ, then $x =$ _____ and $y =$ _____.

Check your understanding:

1. Find the **coordinates** of the point at the given angle on a circle with radius 3.8 centered at the origin. (From the module we know $x = r\cos\theta$ and $y = r\sin\theta$ but I encourage you to also sketch each angle to help you understand "the location" of the coordinate!)

   $a)\ 90°$ $b)\ -270°$ $c)\ -540°$

2. In the following figure, the circle shown is the unit circle. Find the **coordinates** of $P(x, y)$. Round your answer to 3 decimal places



3. Given $P \approx (0.707, 0.707)$ is a point on the unit circle with angle 45°, estimate sin 135° and cos 135°. (Sketch 135°to help you understand exactly the location of the coordinates)