Name: _____ Date: _____ Period: _____

Chapter 8: Intro to Trigonometry
Topic 7: Degrees and Radians

DO NOW:

Using a QSFR chart, find the exact value of cos(240°)

Working with Degrees:

Degree measures are not typically expressed as decimals. Instead, we use a system of _____ and _____, just like a clock! For the purposes of this class, we will just work with minutes.

The number that we associate with minutes is _____. Minutes are abbreviated as ___

For example: 25 degrees and 18 minutes would be written as 25°18′

Steps to convert a decimal degree measure to degree/minute form:

Example: What is the value of 74.3039° to the nearest minute?

1. Round to the nearest hundreth — 1.
2. Multiply the decimal part by 60 — 2.
3. Combine with the whole number & write in Degree/Minute form — 3.

You Try:

Examples: What is the value of the given degree measure to the nearest minute?

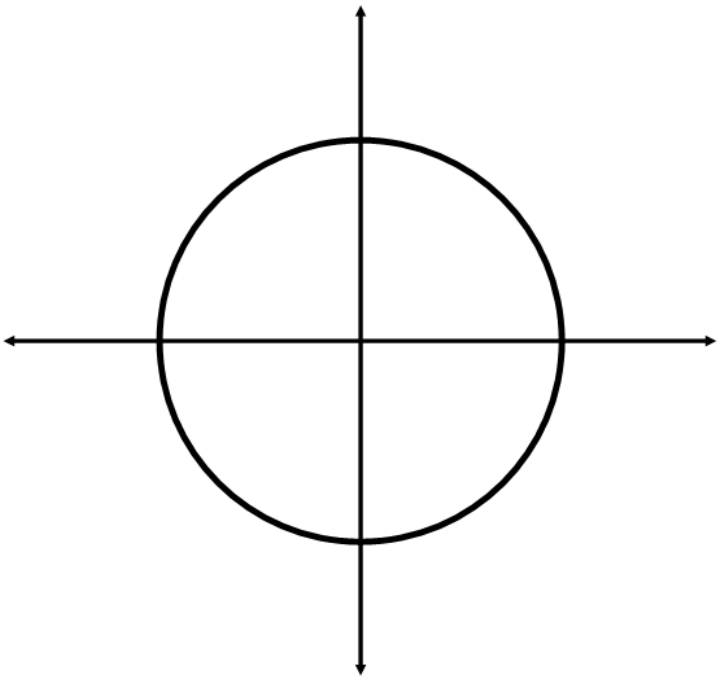
1. 25.0864°
2. 200.1034°
3. 145.907°
4. 18.997°

Name: _____ Date: _____ Period: _____

Working with Radians:

Radians are another set of numbers that measure angles on the coordinate plane. Instead of being based on a circle measure of _____ like degrees, it is based off of a full rotation equal to _____.

Let's re-look at the coordinate plane and unit circle, and label radians:



The number one relationship between degrees and radians is:	
To convert from Degrees to Radians:	To convert from Radians to Degrees:

Examples:

Convert the following into radians:

63° 30° 315°

Convert the following into degrees:

$\frac{3\pi}{2}$ $\frac{8\pi}{10}$ $\frac{\pi}{20}$