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| **OBJECTIVES**  |
| * Convert from degrees/minutes/seconds to degrees in decimal form, using your TI-84.
 |
| * Convert from degrees in decimal form to degrees/minutes/seconds, using your TI-84.
 |
| * Define *radian*.
 |
| * Illustrate a radian.
 |
| * Know the approximate value of one radian in degrees, accurate to one decimal place.
 |
| * Convert from radians to degrees.
 |
| * Convert from degrees to radians. Give both an exact answer and an approximate answer.
 |
| * Find the length of an arc subtended by a central angle that is given in degrees in a circle of radius *r*.
 |
| * Find the length of an arc subtended by a central angle that is given in radians in a circle of radius *r*.
 |
| * Find the area of a sector with given radius r and the central angle in radians.
 |
| * Find the area of a sector with given radius r and the central angle in degrees.
 |

**MONDAY (2.17.25) Student Holiday, No Class**

**WEDNESDAY (2.19.25)**

**Discuss the previously assigned class work/homework:** Convert 200 rpm to miles per hour for a wheel with a radius of 15 inches. Round to the nearest tenth. Show your work.

**Class Work/Homework:**

* Pages 319 - 321 (#44, 59, 61, 72).
* **Study for Quiz** (Converting RPM to MPH) to be taken during your next class period. You may use your calculator. You may **not** use your notes.

**FRIDAY (2.21.25)**

**Discuss the previously assigned class work/homework:** Pages 319 - 321 (#44, 59, 61, 72).

**Quiz** (Converting RPM to MPH). You may use your calculator. You may not use your notes.

**MONDAY (2.24.25) Review the following concepts to prepare for a test** during your next class period. You may use one page of notes written on one sheet of paper, 8.5 by 11 inches, front and back, and your calculator.

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| * Find the length of an arc subtended by a central angle that is given in degrees in a circle of radius *r*.
 |
| * Find the length of an arc subtended by a central angle that is given in radians in a circle of radius *r*.
 |
| * Find the area of a sector with given radius r and the central angle in radians.
 |
| * Find the area of a sector with given radius r and the central angle in degrees.
 |

**Class Work:**

 (1) Given the sector in a circle with a radius of 10 feet, as shown below:

1. Find the arc length, rounded to the nearest tenth. \_\_\_\_\_\_\_\_\_
2. Find the area of the sector, rounded to the nearest tenth. \_\_\_\_\_\_\_\_\_



1. The area of a sector with radius  cm has an area of  square feet. Find the arc length, rounded to the nearest tenth. \_\_\_\_\_\_\_\_\_\_\_
2. Given the sector below in a circle with a radius of 5 inches,

(a) Find the arc length, rounded to the nearest tenth. \_\_\_\_\_\_\_\_\_

(b) Find the area of the sector, rounded to the nearest tenth. \_\_\_\_\_\_\_\_\_