**CHAPTER 3:**

***Logarithmic Functions* (Page 268 – 295)**

**Objectives:**

* Recognize that the inverse of an exponential function is a logarithmic function.
* Graph logarithmic functions.
* Know and use the properties of common logarithms, which have a base of 10.
* Know and use the properties of natural logarithms, which have a base of ***e***.
* Solve exponential equations with and without logarithms.
* Solve logarithmic equations.

**MONDAY (1.27.25)**

**Test:** ***Solving Exponential and Logarithmic Equations.*** You may use one sheet of paper and your TI-84 graphing calculator when you take this test.

**Class Work/Homework:** Read and take notes on pages 312 – 317.

* **CHAPTER 4: *Angles and Their Measures* (Pages 312 – 317)**

|  |
| --- |
| **NEW 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*. |

**WEDNESDAY (1.29.25)**

**Discuss the concepts on pages 312 to 317.**

**Class Work/Homework:** Be ready to discuss.

(1) One degree = \_\_\_\_\_\_\_\_\_\_\_minutes. One minute = \_\_\_\_\_\_\_\_\_\_seconds.

One degree = \_\_\_\_\_\_\_\_\_ seconds.

The symbol for *degree* is \_\_\_.

The symbol for *minute* is \_\_\_.

The symbol for *second* is \_\_\_\_.

(2) Write 36o33’12” in words, using the appropriate units.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(3) DMS stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(4) Use your calculator to convert 36o33’12” to decimal form. \_\_\_\_\_\_\_\_\_\_\_\_\_

(5) Use your calculator to convert 49.28o to DMS. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(6) 180 degrees = \_\_\_\_\_\_ radians.

(7) 1 radian is approximately \_\_\_\_\_\_\_\_\_\_ degrees, accurate to one decimal place.

(8) Draw an illustration of 1 radian, using a circle with a radius equal to 2 inches.

(9) Change radians to degrees. Round to one decimal place. \_\_\_\_\_\_\_\_\_

(10) Change 2.3 radians to degrees. Round to one decimal place. \_\_\_\_\_\_\_\_\_\_\_\_

(11) Change 203 degrees to radians. Give an exact answer. \_\_\_\_\_\_\_\_\_\_\_

Now, give an answer rounded to 2 decimal places. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(12) The formula for finding the are length *s* subtended by a central angle of θ radians in a circle of radius *r* is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Draw an illustration of the situation.

(13) Find the length of an arc subtended by an angle of radians in a circle with a radius of 20 inches. Round to one decimal place. \_\_\_\_\_\_\_\_\_

(14) The formula for finding the are length *s* subtended by a central angle of θ degrees in a circle of radius *r* is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Draw an illustration of the situation.

(15) Find the length of an arc subtended by an angle of 114 degrees in a circle of radius 6 feet. Round to one decimal place. \_\_\_\_\_\_\_\_\_\_

**FRIDAY (1.31.25) B-DAY, NO CLASS**

**MONDAY (2.3.25)**

**Discuss the previously assigned work.**

**Class Work/Homework:** Page 318 (***Exercises:*** #1 – 25 odd, 32).