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| **CHAPTER 3:** ***Exponential and Logistic Functions* (Pages 245 – 267)** |
| **Objectives:** |
| Define exponential functions. |
| Distinguish between growth and decay. |
| Graph an exponential function, showing its initial value and its asymptote. |
| How do you find the initial value of an exponential function? |
| **Essential Questions:** |
| What is the model for exponential growth? What is the model for exponential decay? Can you give an actual example of exponential growth? Can you give an actual example of exponential decay? |
| Define logistic functions as a special type of exponential function. |
| Find the initial value of a logistic function and its 2 asymptotes. |
| Find the inflection point of a logistic function. |
| Model actual situations with exponential and logistic functions. |
| **Technology:** TI-84 plus graphing calculator |

***MONDAY, 11.11.24***

**Discuss the previously assigned work:**

* Page 256 (#49)
* Graph these two logistic functions.

1. **y = \_\_\_\_\_\_\_20\_\_\_\_\_\_\_\_\_\_**

**2 + 3e0.2 x**

1. **y = \_\_\_\_\_\_\_20\_\_\_\_\_\_\_\_\_\_**

**2 + 3e- 0.2 x**

* **Quick Review** \_\_Page 264 (#1 – 10).
* Page 265 (#19 – 22).

**Study for a** **Quiz (Graphing a Logistic Function) to be taken on Wednesday, 11.13.24.** You may use one page of notes, written on one sheet of 8.5 by 11-inch paper, front and back, to be turned in with your quiz. You will plot and label the initial point, the 2 asymptotes, and the inflection point.

***WEDNESDAY, 11.13.24***

**Class Work:** Pages 264, 265, **Exercises** (#1 – 13 odd).

**Review how graph a logistic function**. Be sure to plot the initial point and the inflection point. Draw the 2 asymptotes, using dashed lines.

**Quiz (Graphing a Logistic Function)**

**Homework:** Pages 264, 265, **Exercises** (#2 – 14 even).

***FRIDAY, 11.15.24***

**Homework-Check:** Pages 264, 265, **Exercises** (#2 – 14 even).

**Class Work/Homework:** Page 265: (#16 – 18).