

Grade 9 - 11

Distance Learning Module 8: Week of: May 26<sup>th</sup> - May 29<sup>th</sup>

Exponential Functions

## **Algebra 2, Level 2 - Modified from [Unit 6- Exponential, Logarithmic and Additional Inverse Functions](#)**

### **Targeted Goals from Stage 1: Desired Results**

**Content Knowledge:** Graph exponential functions and understand the relationship between growth and decay, apply exponential function models to word problems and determine what information to solve for.

**Vocabulary:** exponential growth/decay,  $e$ , continuous, logarithm, common and natural logarithms, half-life

**Skills:**

- Graphing and understanding key elements of exponential functions
- solving problems related to growth, decay, compound interest
- identifying functions as models of exponential growth / decay

**Expectation:**

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday:	<b>Memorial Day</b>	<b>No School</b>
Tuesday:	Vimeo: Zombie Apocalypse (up to 7:40)  Video: Introduction to Exponential Functions  slides unit F 41-44	Introduction to Graphing Exponential Functions worksheet
Wednesday:	Khan video: Exponential function graph  Khan video: Graph of exponential growth	Khan practice: Graphs of exponential growth  Complete the worksheet (this will be easier if

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
		you print it out and write directly on the printout): Graphing Exponential Functions worksheet
Thursday:	Video: Introduction to exponential growth and decay word problems  Video: Exponential Growth Word Problems  Video: Exponential Decay Word Problems  slides unit F 47-54	Exponential Basic Growth and Decay Word Problems worksheet
Friday:	Video: What is compound interest?  Video: Compound Interest Word Problems  slides unit F 47-54	Complete 2, 6, 11, 12, 15, 16, 17 must show formula and all work. Exponential Compounding Word Problems

**Week criteria for success** (attach student checklists or rubrics):

Students will be able to:

1. Understand the difference between exponential growth and exponential decay
2. Understand the concept of compounding
3. Use exponential function formulas to solve real life applications

**Supportive resources and tutorials for the week** (plans for re-teaching):

1. Khan video: Exponential Growth and Decay Word Problems
2. Video: Compounding Continuously Word Problem Example
3. Video: Exponential Growth and Decay Word Problems & Functions - Algebra & Precalculus
4. Office Hours