*Grade 10*
Distance Learning Module 1: Exponential Functions
Week of: 3/30 - 4/3

# Mathematics: Algebra 2 (Level 1) - *Modified from Unit 6 - Exponential and Logarithmic Functions*

## Targeted Goals from Stage 1: Desired Results

**Content Knowledge:** The meaning of each of the parameters within an exponential function, the difference between growth and decay.

**Vocabulary:** exponential growth, decay, natural base, e, continuous, compound interest

**Skills:** Identifying functions as models of exponential growth and exponential decay, graphing exponential functions using the concept of transformations, using exponential models including compound interest, continuous interest, growth, decay.

**Expectation:**

| Description of Task (s): | Resources and Materials: | Daily Checks (Return to Google Classroom or snapshots from a cell phone) |
|---|---|---|
| Monday: Identifying exponential Functions and their graphs. | Video Tutorial (Khan): Intro to Exp. Functions<br>Video Tutorial (Khan): Graphs of Exponential Functions (Student will take notes)<br>Worksheet: Exponential Growth and Decay | Picture of student notes,<br>Snapshot of Students worksheet answers |
| Tuesday: Graphing Exponential Functions | Graphing Practice Worksheet | Snapshot of Students worksheet answers |
| Wednesday: Transformations of Exponential Functions | Desmos: Exponentials - Marbleslide | Desmos Teacher View |
| Thursday: Natural Exponential Functions, Application Problems | Video Tutorial (Virtual Nerd): Natural Base Exponential Function<br>Video Tutorial (Khan) : Exponential word problems<br>Word Problems Practice Worksheet | Snapshot of Students worksheet answers |
| Friday: More Application problems and Review | Google Slides: Modeling with Exponential | Snapshot of students word problem solutions (Page#388, Problems 74, 76, 78, 80, 81) |

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

By the end of this module, students will be able to

- identify exponential growth and decay
- graph exponential functions
- create exponential functions to represent real life situations

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

- Office hours,
- Textbook,
- Khan academy
- Module 1 - Google Slides
- Exp Growth Extra Practice Worksheet (with Answer Key)