

Grade 12

Distance Learning Module 6: Week of: May 11<sup>th</sup> – May 15<sup>th</sup>

## Introduction to Calculus - *Modified from [Unit D - Using Calculus to Sketch Curves](#)*

### Targeted Goals from Stage 1: Desired Results

**Content Knowledge:** Increasing vs Decreasing Intervals of a function

**Vocabulary:** Critical values, increasing, decreasing

**Skills:** Using the First Derivative test and the Number Line test to determine the intervals where a function is increasing and decreasing.

### Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Introduction to the first derivative test.	Class Notes - 1st Derivative Test Paul Birdsall Altvista – The Power Rule	Khan Academy Practice - 1st Derivative Test Relative minima & maxima
Tuesday: Using the first derivative test and the number line test to determine the intervals where a function is increasing and decreasing.	Class Notes -Increasing vs Decreasing Paul Birdsall Altvista – The Power Rule	Khan Academy Practice - Increasing vs Decreasing
Wednesday: Wrapping up extrema and intervals of increase and decrease.	Videos -Putting it all together Paul Birdsall Altvista – The Power Rule	Khan Academy Quiz -Min, Max, Increasing, and Decreasing
Thursday: Using the two tests to sketch the graph of a function.	Khan Academy - Check Point #1 <i>Analyzing mistakes when finding extrema Example 1</i>	Worksheet on Max, Min, Increasing, and Decreasing
Friday: Wrapping up module 6	Khan Academy - Check Point #2 <i>Analyzing mistakes when finding extrema Example 2</i>	Khan Academy - Complete All Khan Academy Videos, Practices, and Quizzes.

**Week criteria for success** (attach student checklists or rubrics): Students should be able to use the First Derivative test and the Number Line test to determine the intervals where a function is increasing and decreasing. Students should be able to use the two tests along with the extrema to sketch the graph of a function.

**Supportive resources and tutorials for the week** (plans for re-teaching): Khan Academy, worksheets, office hours