

Grade 12

Distance Learning Module 3 - Week of: 4/13<sup>th</sup> – 4/17<sup>th</sup>

## Mathematics: Introduction to Calculus - *Modified from [Unit C - Derivatives](#)*

### Targeted Goals from Stage 1: Desired Results

**Content Knowledge:** Applying Rolle's and the Mean Value Theorem

**Vocabulary:** Increasing vs Decreasing

**Skills:** Using the Mean Value Theorem and Rolle's Theorem to determine whether a solution is possible over a given interval. Introduction to increasing and decreasing intervals of a function.

### Expectation:

| Description of Task (s):                          | Resources and Materials:  | Daily Checks<br>(Return to Google Classroom or snapshots<br>from a cell phone)              |
|---|---|---|
| Monday: Related Rates                             | Class Notes -Related Rates Day 2<br><a href="#">Altvista-The Power Rule</a>       | Related Rate Worksheet<br>(Posted in Google classroom)                                      |
| Tuesday: Introduction to Rolle's Theorem          | Class Notes -Rolle's Theorem<br><a href="#">Altvista-The Power Rule</a>           | Khan Academy Practice - Rolle's Theorem<br>YouTube -Mean value theorem - Existence theorems |
| Wednesday: Introduction to the Mean Value Theorem | Class Notes - Mean Value Theorem<br><a href="#">Altvista-The Power Rule</a>       | Khan Academy Practice - Mean Value Theorem  |
| Thursday: Applying the Mean Value Theorem         | Class Notes - Mean Value Theorem Day 2<br><a href="#">Altvista-The Power Rule</a> | Khan Academy Practice - Mean Value Theorem  |
| Friday: Increasing vs Decreasing Functions        | Class Notes - Mean Value Theorem Day 3  | Worksheet - 2.9   |

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|--------------------------|----------------------------------|--|
|                          | <u>Altervista-The Power Rule</u> | Posted in Google classroom   |

**Week criteria for success** (attach student checklists or rubrics): Students should be able to use Mean Value Theorem and Rolle's Theorem to determine whether a solution is possible over a given interval. Students should also be able to use the Mean Value Theorem and Rolle's Theorem to indicate the intervals where a function is increasing and decreasing over particular intervals.

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