

## ( AP Calculus AB ) Distance Learning Activity, Day ( 3/23/20 ) (Mathematics)

### Overview: Skill Review

The students will be able to apply skills of differentiation & integration to various categories of problems.

**Estimated Time:** Approximately [45 minutes]

### Explanation:

- ⊙ How is the process of differentiation & integration related as we apply our skills to problems written in algebraic, trigonometric, exponential & logarithmic forms? Explicit and implicit forms?

### Materials that are Needed:

OneNote / CBSD email

### Things to know:

This activity tests your knowledge of CHANGE in both directions! You will be asked to differentiate various situations that exist in Calculus while keeping in mind concepts such as the Chain Rule (layering) as needed to find the derivative. Upon finding the accurate derivative, students will then be asked to show how to integrate their result back to the original form. Please keep in mind your notation and proper evidence when completing these exercises. This is a great way to extend your thinking by connecting the concepts of Differential Calculus to Integral Calculus and show the ability to go both directions as needed. This is a critical skill for all students to be successful in the AP Calc AB curriculum.

I am available for questions regarding content through your CBSD email account. Please be specific about your question if referencing a problem so I may provide you meaningful feedback (For example, Unit 7.1 – WS, #3). I will be happy to follow-up with comments and feedback directly in your personal OneNote as needed. Good Luck!

### Tasks:

#### 1. Independent Practice Activity

Complete the Derivatives vs. Integral Review Activity Slide with the 12 questions provided and make corrections/revisions using the Solutions provided.

- Find the derivative using an appropriate method.
- Integrate your result back to the original form using an appropriate method.

Use proper **NOTATION** and show all steps involved in this process. As always feel free to email me with follow-up questions as needed.