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AP Calculus Website Review Project

We have a little under two weeks remaining before the AP exam which means it is time to begin reviewing. The goal of this project is to help you organize your thoughts on what you need to review as well as teach you some skills on how to build a website. Most of this project will be done in class and graded per the following rubric below.

You may use any website building software you prefer; however, my recommendation is that you use Weebly.

Your website must include the following pages each with the following requirements:

- Intro Page (5 points)
  - Picture of you (1 point)
  - Favorite Math Topic (2 points)
  - Interesting fact about you academically (2 points)
- Topics (70 points AB/ 80 points BC)
  - Topics pages
    - Limits & Properties (10 points)
    - Differentiation (10 points)
    - Applications of differentiation (10 points)
    - Integration (10 points)
    - Logarithmic & Exponential functions (10 points)
    - Differential Equations (10 points)
    - Applications of integration (10 points AB/5 points BC)
    - **Integration Techniques** (5 points)
    - **Series & Sequences** (10 points)
  - Requirements
    - Summary of each topic
      - Do your best to put it into your own words and do not copy and paste.
    - Key definitions and formulas
    - 3 practice questions for each topic worked out (Can be MCQ's)
    - Must have 3 FRQ's within the topics pages
      - Can have more FRQ's if deemed appropriate however at least 3 FRQ's must be screen casted/recorded and uploaded as a video file.
    - Some sort of visual aid
  - Note for some of the BC only topics you can fit them into the AB topics.
    - For example, Logistic Growth in the Differential Equations section.
- Resources/Games Page (20 points AB/ 10 points BC)
  - Links to various sources or notes (at least 6 external sources AB/ at least 4 external sources BC) (3 points each, 1 point for source 2 point for explanation AB/ 2 points each, 1 point for source 1 point for explanation BC)
    - Explain why you chose the sources (few sentences)
  - Textbooks or practice problems

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        - If you pulled problems from a source say where you used it on the website.
    - Places you pulled inspiration from
        - Why does it inspire you?
    - Any calculus games that you have found
        - How could this help?
    - You need to cite where you pulled all your problems from. (2 points)
- History Page (5 points)
    - Choose a famous mathematician and briefly discuss their contribution to calculus.
        - Must be different than your classmates.
        - Brief blurb about what this mathematician did. (2 points)
        - Explanation of why you found it interesting and why it is important. (2 points)
        - Visual Aid (1 point)

Topics Rubric:

Each Topics page is worth 10 points*, this will be scored based on your ability to show your work and choose appropriate problems. They will be graded per the following rubric.

	4	**3**	**2**	**1**
Work and explanations	Shows all work and is easier to understand the problem because of their work.	Shows work and is easy to read.	Show's some work but it is illegible in some places.	Does not show work or it is illegible.
Problem Difficulty and Selection	Shows a variety of problems and covers all the sections. The problem choice pushes the content and helps the reader in understanding the content.	Shows a variety of problems and covers all the sections.	Has a variety of problems but does not cover all of the sections.	Problems are trivially easy and only one section is covered.
Organization	n/a	n/a	Website page is organized. Met all of the page requirements	Website page is disorganized.

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*** For the 5 point BC topics this will be modified. For example if you scored a 8/10 on the rubric for your page that would translate to a 4/5.*

Screen Casting/ Recording (This falls under the "work and explanation" category of the rubric)

Time: It should be somewhere in the range of 4-8 minutes. Having a 10-minute video is not any better than having a 5-minute video.

Volume: I can hear you speaking always and you are not mumbling.

Video quality: The video doesn't shake, you have good lighting, all the math that you are doing is visible.

Mathematics: You chose an appropriately difficult math problem and explained it adequately. Your math is correct and this would help a student who may be struggling with the chosen content.

The other various pages will be scored according to having met the requirements of each page.

This project is due by Friday May 10th.

***This rubric is subject to change during the project.