AP Calculus: End of Year Project

**Task:** Your job will be to create an abridged AP Calculus Exam with 10 multiple choice questions and 2 free response questions.

**Requirements:**

* Must assess at least 10 different Calculus concepts
* Free response questions must incorporate ideas from more than one unit
* One of the free response questions must include a context
* At most one of the FRQs can require a calculator
* Questions must include content in multiple representations (graphical, numerical (tables), analytical (equations), and verbal)
* Questions must balance procedural skills with conceptual understanding
* Multiple choice wrong answers should reflect common mistakes
* Answer key for MC and free response scoring rubric
* Equal distribution of workload among group members
* Questions are original and not taken or modified from a preexisting question found online
* Typed using proper equation notation or hand-written (neatly)

**Deadlines: Final project due on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* Group established by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* 3 MC questions due on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* 3 MC questions due on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Stems for both free response questions due by \_\_\_\_\_\_\_\_\_\_\_\_\_\_(the stem is the problem info given before any of the questions are asked)
* First draft of all questions due on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_for review by your teacher

**Collaboration:**

You will be working in groups of 2, 3, or 4. You are allowed to choose your own groups with students in your hour. Collaboration can take place during class, via Google Meet/FaceTime outside of class or through Google docs.

Short tutorials will be provided on how to make graphs on Desmos and use the Equation Editor in Google Docs or Microsoft Word.

**Rubric:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 | 2 | 3 |
| Completion | 5 MC questions and 1 FRQ | 10 MC and 1 FRQ or  7 MC and 2 FRQ | 10 MC questions and 2 FRQs & Answer Key |
| Requirements | Misses 3 or more requirements | Meets all but 1-2 requirements | Meets all requirements |
| Representations | Exam includes only 1-2 representations | Exam includes 3 representations | Exam includes all 4 representations |
| Balance | Exam only includes routine or procedural questions | Exam includes mostly routine or procedural questions | Exam includes procedural and conceptual problems of varying difficulty |
| Collaboration | One group member does the majority of the work | One group member does significantly less than the rest of the group | Work is distributed fairly equally among group members |
| Creativity | Questions are not at all original or creative | Questions are somewhat original and creative | Questions are highly original and creative |

Total: \_\_\_\_\_\_\_/18

This project will be weighted as a test grade.