1 | General Aftercare

- Assignments on Canvas (preferably a PDF)
- Collaborate as much as possible
    - Learn and share ideas together
    - Collaborate well together
- Nikhil TAing!! ;)
- ~30 mins of HW/class period. *time* the assignments and write it down on top.
- Tests are take home, duh (COVID NOISES!!), and are Assigned Wednesday, Due on Monday)

Expectations * A notebook should be maintained + some solved sample problems * Homework assigned each class * HW graded for Habits of Mind rubric * One graded assignments every two weeks or so

Textbooks: https://math.libretexts.org/Bookshelves/Calculus/Map%3A_Calculus__Early_Transcendentals
https://math.libretexts.org/Bookshelves/Calculus/Book%3A_Calculus_(Apex)
or
https://openstax.org/details/books/calculus-volume-1
https://openstax.org/details/books/calculus-volume-2

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2 | Knowledge Points This Semester

- Limits
    - Eplison delta proofs
    - Limit laws
    - Evaluating functions
    - Prove limit laws
- Continuity
    - Types of continuity + discontinuity
    - Define continuity
    - Immediate value theorem
        - Application +
        - Boundedness
- Derivatives
    - Limit definition of derivatives
    - Define differentialibity
    - Understand how the first and second order derivatives
    - Talor Series approximations
    - L'Hospital rules for limits w/ indeterminate rations, indeterminate products, indeterminate products
- • a final project

Everything you use on tests must be derived by you.

=> Make test corrections + consider reassessing (immediately) if necessary + meet with instructors & TAs during *Wednesday lunch* or *Friday tutorial*

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3 | So, what *is* Calculus?

- The analysis of change
- Study of curves
- Study of rate-of-change

Rate of change

We have seen this before: **Slopes!**

> The rate of change tells you the relation in the trend of the graph. Think! Negative and positive functions!

Definition 1 · **First order rate of change** How much is the function changing over a period of time?

Definition 2 · **Second order difference** How much is the rate of change changing over time?