

APEC Math Review

Introduction

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Course Overview

- Monday to Friday 9-12
- Ruttan Hall 119
- Natalia Ordaz Reynoso: ordaz008@umn.edu
- Office 218-A
- Office Hours at Waite Library 12:00-13:00 M-F

Main Topics

- Notation
- Proofs *
- Real Numbers, sets
- Functions *
- Calculus
- Optimization *
- Matrices
- Dynamic Programming

Books and Materials

Books I will use:

- ① Book of Proof (free PDF)
- ② Bartle and Sherbert
- ③ Sundaram
- ④ “Mas Collel” (Waite)
- Pro tip: <https://www.lib.umn.edu/>
- Other class materials in my website:
<https://www.nataliaordazreynoso.com/teaching/university-of-minnesota/apec-math-review>

Some notes

- Work hard!
- You will get out of math camp what you put into it
- Problem sets will not be graded, but we will discuss some in class and I will post answers
- I might have you work in groups sometimes. I will create groups to make sure there are gains from trade
 - but don't fall in the trap of going to a group meeting and just being idle. You only benefit if you are engaged.

HOW TO STUDY MATH



Don't just read it; fight it!

— Paul R. Halmos

Goals

- ① Refresh your previous knowledge of math topics that will be most useful for the first year of your PhD (or masters)
- ② Teach you the basics of those topics you have not studied before
⇒ Learning in layers
- ③ Provide you with references for such important topics for the future

Any Questions?

A little bit about myself

- I am from Mexico
- This is my fifth year in the PhD program
- My research interests lie within the field of development economics
- I have a dog, who you might see around Ruttan occasionally

Yes, you can see a picture, glad you asked



Now you

- ① Name
- ② Program
- ③ Where you are from
- ④ Something you like