Day 1: Introduction to Math Camp

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Math Camp 2021

Background

- Course covers needed background for statistics courses in PS and Soc
- Begin with math background
- Cover probability and basic statistics
- (re) visit calculus (WOOHOO!)

Background: How this Course Builds

- Every day builds on previous
- Jumping to integrals would be hard and complicated – so unpack one concept a day at a time
- Each day can matter because it's a Thing You Need To Know (e.g. algebra) or because it will lesson the pain later (e.g. function composition).
- Everyone comes with a different level of experience and background–learning is a journey

Goals

When this course ends, we'll have accomplished the following:

- Introduce and/or refresh math foundation for fall class
- Familiarity with software options and programs for the fall
- Understanding of expectations for fall course, familiarity with TAs and Professor
- Accomplishment of introductory aspects of course (can load programs, calculate integral, etc)
- Hit three levels of depth, depending on concept: can recognize, somewhat familiar, comfortable

Expectations

For this course and the fall classes:

- Come to every session
- Review the slides
- Check out the book
- Ask questions
- Try practice problems
- Complete the assignments
- This class is a big commitment: it will feel as long for you as it does for us!

Miscellaneous

- Start on time
- Assignments due by next day – do your best and feel free to work together as long as you submit YOUR OWN work.
- Class not graded, answer keys posted
- Foundation for methods classes – maybe some new content, maybe less so

Impetus: Why are we all here?

- Do voter ID laws affect turnout?
- Is there a wage gap between genders?
- Would enshrining more rights in a constitution lead to a more stable document than a more vague/ambiguous specification?

Impetus: Why are we all here?

- Literacy in quantitative methods
- Develop skills to excel in quantitative coursework
- Build relationships with cohort – study groups, etc

How do I GRAD STUDENT?

- DO THE READING (this might sound crazy, but this is really the most free you'll be in the foreseeable future)
- BUILD COMMUNITY (these are the people you'll be excited to see at conferences, coauthor with, talk ideas over, etc)
- BE TRUE TO YOURSELF (work to develop your research interests, be well rounded, but try to aim toward your final goal)
- BE KIND TO YOURSELF (grad school will take forever and be frustrating at times; well-meaning relatives will ask when you're going to 'get a real job')
- GET A HOBBY (something orthogonal to your grad school progress – fitness, cooking, reading, numismatics, theater, etc)

COVID Plan

- Don't come to class if you don't feel well
- We will all need to be flexible, adaptable, and kind this term
- Masks indoors per CDC
- I have young kids in school (can't get vaccine yet), so I will need to be particularly flexible/adaptable.

Assessment

~20 mins, answer what you can

Introductions

Let's get to know each other a bit more – Name, pronouns, subfield/research area, where you are currently, something fun/interesting about you and/or your hobbies