Warmup

- Pick up questionnaire and syllabus
- Read syllabus
- Fill out questionnaire
About Me

• I’m a second year PhD student in mathematics.

• The kind of math I do is called number theory.

• My office is in the hallway one floor up from this classroom. It has an origami wreath on the door.

• Fun Fact: I’m kind of obsessed with Doctor Who.
Main Topics of Course

- **Integration Techniques**
  - You learned u-substitution in Calc 1, we’ll learn more

- **Differential Equations**
  - First example: If \( \frac{dy}{dx} = ky \), then \( y = Ce^{kt} \)

- **Sequences and Series - Hardest!!**
  - Sequence: 1, 1/2, 1/3, 1/4, 1/5, …
  - Series: 1 + 1/2 + 1/3 + 1/4 + 1/5 + …
What ties them all together?

• Build off of core material from Calc 1
  • Limits
  • Differentiation
  • Integration

• Learn lots of techniques, have to figure out which one to use (sometimes involves trying multiple ones!)

• More mathematically sophisticated than Calc 1
Structure of Class

• **Warmup** at beginning of most classes
  • Not collected or graded (will go over in class)
  • Feel free to work together!

• **Homework** assigned for each section
  • Not collected or graded (will post solutions)
Structure of Class (Cont.)

• **Quizzes** every Wednesday (20% total)
  • Mostly from previous week’s homework

• **Three exams** during semester (15% each)

• **Cumulative Final** (35%): **Tuesday May 5**

• There will be a formula sheet when needed
How to Study

• Read textbook before and after class
• Make “cheat sheet” / outline / study guide
• Ask questions - study group, help sessions, me
• Do homework problems after every class
• Review calc 1 material as needed
Resources

- Other students in course
- Calc Help Sessions (TWTh 5:30 - 7:30)
- EPASS Tutors
- Me (office and appointment hours)
- Khan Academy (videos and exercises)
- Textbook (and textbook website)
Calc 1 Review

• Today: Inverse Trig, Exponential, and Logarithmic Functions (1.5 - 1.6)

• Friday: Integration (5.1 - 5.5)

• Wednesday: Review Quiz
  • Calc 1 Pretest
  • Calc 1 Review Problems