Active Learning in MATH 2415

John Zweck
How do you memorize course material?

Why is memorization important?
Memory is the residue of thought\textsuperscript{1}

\textsuperscript{1}Willingham, 2009
What is Active Learning?

We use Active Learning in our Problem Session.

With Active Learning you will:

1. Engage in mathematical reasoning
2. Solve problems with your fellow students
3. Explain your thinking to each other and the TA
How Does Active Learning Work?

- TA starts with 10 minute summary of lectures
- Then you
  - Actively solve assigned problems
  - Work in small groups of 3-4 at white boards
  - Explain your solutions to each other and to TA’s
  - Photograph your solutions
  - May have a quiz at the end
- The Teaching Assistants
  - Check in regularly with each small group
  - Mostly ask questions, but can answer “Yes” or “No”
  - Help you explain math: "So you are saying...."
Why Do Active Learning?

Educational Research on STEM courses shows:

1. You learn significantly more with an active learning technique than with traditional methods

2. Your chance of failing with an Active Learning format is 66% less than with a traditional format
Why Do Active Learning?

Your peers in a UT Dallas Calculus course say:

“The problem sessions, too, were much better than any I’ve had in the past. They were relaxed, engaging, and helpful to my comprehension.”

“The problem sections were much more productive with the students working problems in groups as opposed to another lecture from the TA.”

“The structure of the problem sessions is the best I’ve ever seen. You get to learn by working with others. Allowing us to explain material with a TA’s guidance is highly beneficial.”
Learn How To Learn

The only way to learn is through repeated Study and Retrieval sessions

Some Resources

[link to Chew Videos]

[link to MATH 2415 Syllabus: See "Advice for Exams"]