

## Calculus **Preparing for an Exam** Dr. Laura Gross

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1. **Review the “Tips for Success”** listed in your course syllabus.
2. **Reread your notes, making a topic outline.** You need complete information, so make sure you photocopied a classmate’s notes on any day you had to be absent.
3. **Reread class handouts, exercises, and quizzes.** Look at how they fit into the topic outline, and expand the outline as needed.
4. **Reread the theorems and definitions** highlighted in the text. Look at how they fit into the topic outline, and expand the outline as needed.
5. **Do the end-of-chapter review:** concept check, true-false quiz, and exercises. Look at how they fit into the topic outline.
6. **Identify the major themes of your topic outline.** The list is long but constitutes a coherent subject. As such, the items are logical and systematic— not haphazard and miscellaneous— components of the “big picture.” Review your topic outline from this point of view.
7. **Put major themes onto flashcards, and test yourself:** Make sure you know key definitions and problem-solving tools related to the themes.
8. **Make a set of flash cards of problems that fully represents your topic outline.** Use homework problems, textbook examples, and examples from your class notes. Mix up the cards.
9. **Do all of the problems on the flashcards.** Check your answers.
10. **Pull out 10–15 cards, and do the problems under approximate test conditions—** 50 minutes in a quiet place with no checking the book or notes. (Even if notes will be provided, it’s better to study and practice without them. You learn the material very thoroughly that way. On the exam, use any notes that are provided strictly for checking purposes. Although this approach takes discipline, it pays off as more and more topics build up in the course. Besides, you may be asked to *derive* rules on the exam, generating them as we did in class.) Follow the calculator rules. Afterward, think of ways to check your answers without consulting notes. Consider: Did you end up with a representative set of problems, or were some themes missing?
11. **Identify the problems that you can’t solve in a comfortable and automatic fashion.** Do more many more problems of those types until they become straightforward.
12. **ASK QUESTIONS.**
13. **Have a conceptual understanding of the problems.** If you find you are doing some of the work by rote manipulation instead, reread the relevant parts of the textbook. Have discussions with the professor and your classmates.
14. **Ask for help with study techniques** if you have trouble carrying out these steps.

**If you’ve mastered the homework, you’re in good shape for the test.**