

LIST OF TOPICS FOR MATH10B: MIDTERM 2

- Exam Date: Nov. 16, 2012, usual lecture time.
- You must bring a Blue Book in which to write your exam.
- Please bring your UCSD student ID to the exam and expect it will be checked.
- You may bring one $8.5'' \times 11''$ sheet of handwritten notes (front and back) to the exam.
- No calculators or other electronic devices.
- Midterm 2 covers sections 6.4, 7.1, 7.2, 7.4, 7.7, 7.8.

The exam will be based on homework questions and lecture material, including all examples presented in class. To help guide your studying, make sure you are familiar with the following topics:

TOPICS

1. The Second Fundamental Theorem of Calculus and its applications.
2. Integration by substitution.
3. Integration by parts.
4. Evaluating integrals using partial fraction decomposition.
5. Trigonometric substitution.
6. Evaluating improper integrals (or determining they diverge).
7. Comparison of improper integrals (the comparison test): determining convergence or divergence without evaluating the integral.

The focus of the second midterm is on topics we have covered since the first midterm; however, the newer material builds on the concepts we learned earlier in the quarter. You will be expected to understand the material we covered in chapters 5 and 6 in addition to the above topics.