

Math 1230 Midterm II Info Sheet

The purpose of this handout is to help you study by listing the concepts, definitions, and results you will need to know for the midterm.

Midterm Information. Here's the time and location:

- (1) **Time:** 8:00AM-9:20AM on Wednesday, March 14, 2007
- (2) **Place:** UC 2011 (Upper lecture theatre)

Note that we will start early and we will be in another classroom.

- You must **Bring your STUDENT ID.**
- You may not use a calculator. However, you will be allowed to bring one regular 8.5 x 11 sheet of paper with notes on only **one** side. What you put on this sheet is up to you.

Material Covered. The exam will cover all the material discussed in class about Sections 7.4-7.6 and 8.1-8.8 of the textbook.

I have given a breakdown of what you will need to know from each section.

Section 7.4. Know how to find the arclength of function and how to find the area of a surface of revolution.

Section 7.5. Know the definition of work, and how to compute work. Be able to do problems like those in class (e.g. Hooke's law, moving a satellite into orbit).

Section 7.6. Know the definition of a center of mass, and how to compute the center of mass of a planar lamina. You can skip the material on page 503 on a theorem of Pappus.

Section 8.1. This section reviews all the integration techniques that we covered on the first midterm. Many useful techniques in this section.

Section 8.2. Know how to integration by parts. (There will be at least one question on this).

Section 8.3. Know how to integrate trigonometric integrals. Be able to do the problems like those we discussed in class.

Section 8.4. Know how to use trigonometric substitution to solve an integral. (There will be at least one question on this)

Section 8.5. Know how to use the technique of partial fractions to integrate a rational function. (There will be at least one question on this).

Section 8.6. You will not be tested directly on this section (I won't pick an obscure integral that can only be found in the tables).

Section 8.7. Know how to compute limits using L'Hôpital's Rule.

Section 8.8. Know how to evaluate an improper integral.