

Prepare for Exam III
(Math 235)

Time: Nov. 21, 2008.

This Exam will cover section 12.1-12.3 and 12.5-12.6, 12.8 and 13.2.

12.1-12.3

1. Know the definition of the double integral over a rectangle.
2. Know the geometrical interpretation of double integral.
3. Be able to use the iterated integral formula to evaluate the double integrals on type I or II regions.
4. Be able to use the polar coordinates to evaluate double integrals.
5. Be able to find the area of a given region.

12.5-12.6 and 12.8

1. Know the definition of the triple integral over a 3D box.
2. Be able to use the iterated integral formula to evaluate the triple integrals.
3. Be able to find the volume of a given region.
4. Be able to use cylindrical coordinates to evaluate triple integrals.
5. Be able to find the image of a region mapped by a transformation.

13.2

Be able to find line integrals.

Review problems (page 723-724) 9, 10, 14, 20, 30, 35, 49.