MATH 201, Fall 2014
Exam 3 Topics

Exam 3 will take place during the first hour of class on Tuesday, December 9, 2014.

There will be a Question and Answer session during the second half of class on Thursday, December 4, 2014.

The exam covers all material covered since the previous exam, including

- Section 11.7–11.8 (not including Lagrange multipliers involving multiple constraints)
- Section 12.1–12.7 (not including moments or center of mass)

I **especially recommend** the Chapter Reviews given for Chapter 11 (pp. 661–664 (1st Ed) or pp. 691–694 (2nd Ed)) and Chapter 12 (pp. 724–726 (1st Ed) or pp. 757–760 (2nd Ed)).

Review Webwork assignments 7–9. It is possible to return to an assignment and see the correct answers (and possibly solutions).

In addition to computational questions, there will be questions that ask you to understand concepts from the course, possibly including, and not limited to:

- Using the Extreme Value Theorem to prove existence of absolute extrema. (1st Ed p. 651) or (2nd Ed p. 683)
- Geometric explanation of Lagrange multipliers (1st Ed: p. 654 and Exercise 11.8.19) (2nd Ed: p. 654 and Exercise 11.8.21)
- The assumptions involved in Fubini's theorem, and the consequences of Fubini's theorem.
- Definition of double integral on a rectangular region (1st Ed pp. 665–667) or (2nd Ed pp. 695–697)
- Computation of average value. See Exercises (1st Ed 12.1.37 and 12.5.45) or (2nd Ed 12.1.39 and 12.5.49)