

Math 1241 Fall 2011: Topics and Review for Test #2 (Secs. 1.7, 1.8, 2.1 – 2.3)

Suggestions for studying:

- Review the topics listed below and look up anything that seems unfamiliar
- Work the listed review problems
- Since the review problems do not cover all topics, spend some time reviewing your notes and the MyMathLab assignments
- Spend as much time as you can actually working out problems – practice, practice, practice!
- Seek help. Come to my office hours and/or check on tutoring in the Center for Academic Success

Topics:

- Find second and third derivatives
- Find derivatives of functions involving more than one variable
- Use all notation properly
- Find the average rate of change of a function on a given interval
- Find the instantaneous rate of change of a function at a given value of x
- Answer questions given in rate-of-change application problems
- Find and interpret marginal cost, revenue and profit
- Given a graph, be able to describe the asymptotes, intercepts, where increasing and decreasing, relative extrema, concavity and inflection points
- Be able to sketch a graph when given information about the first and second derivatives
- “Read” the graph of the derivative to describe and sketch the graph of the function
- Given a function, be able to determine where the function is increasing, decreasing, relative extrema, concavity, inflection points and intercepts **WITHOUT LOOKING AT THE GRAPH.**

Suggested Review Exercises:

Chapter 1 Review, pg. 128: 53-57, 67, 68-75

Chapter 2 Review, pg. 194: 1-21, 23-42, 45, 46, 49