MATH 201 Exam III Review (3.1 - 4.1)

1. Know the power rule, constant rule, product rule and quotient rule and how to use them to find the derivative.

2. Know the chain rule and how to use it to find the derivative of the composition of functions.

3. Know how to solve general problems involving rates of change.

4. Know how to determine related rates.

5. Know how to find $\dfrac{dy}{dx}$ by implicit differentiation

6. Know how to find the derivatives of logarithmic functions and how to use logarithms and implicit differentiaion to simplify the differentiation of complicated functions,i.e. logarithmic differentation.

7. Know how to determine linear approximation of a function at a point and how to use differentials to determine propagated (maximum) error.

8. Know how to determine maximum and minimum values of a function on a closed interval.

9. Know the extreme value theorem.

Review Exercises

(a) Homework, Quizzes

(b) Ch.3 Review: #1 - 53, 57 - 61, 69, 71 - 81, 88, 96, 97

(c) Ch.4 Review: #1 - 6