Calc β
Midterm Study Guide

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The final exam is cumulative but will be focused primarily on the material from the ninth lecture on. For study resources corresponding to the first 8 lectures, please see the midterm study guide.

The material covered since the first midterm ranges from the applications of differentiation to the substitution method for integration.

To study for this exam I recommend you review all problems I have given you thus far. Blank copies and answer keys to each can be found at the following webpage:

`http://www.math.uconn.edu/~hughes/math1131sum18/homework.html`

If you can do every homework problem you will be fairly prepared for the final exam. I intend about 70 - 80% of the exam to be directly based on the homework. The remaining 20 - % may be problems you have not seen before.

After reviewing your notes and the homework, you may wish to try additional problems to sure up your understanding of a particular section. Here are the supplemental exercises from Stewart (your text) given on the webpage.

Day 9 - Applications of the deriviative in the sciences

3.7: 1 - 8, 11 - 16, 21

Day 10 - Applications of the deriviative: Linear approximation and related rates

3.9: 1, 3 - 15 17 - 19, 22, 36

3.10: 1 - 6, 23 - 28

Day 12 - Derivatives and a function's geometry: extreme values and concavity

4.1: 1, 3 - 44, 76

4.3: 1 - 29, 31 - 44

Day 13 - Optimization

4.7: 47 - 62

Day 14 - Indeterminate forms and antiderivatives

4.4: 2 - 20, 32, 35, 44, 46, 47

4.9: 1, 2, 5 - 22, 25 - 31, 33, 35, 41 - 48, 55 - 57, 59, 61, 62, 73

Day 15 - Areas and the definite integral

5.1: 1 - 17, 23 - 43 49 - 54, 59 - 65, 69, 73 - 77, 79

5.2: 1, 2, 4

Day 16 - The fundamental theorem of calculus

5.3: 5 - 8, 33 - 41

5.4: 1 - 37, 49 - 60, 67, 68

Day 17 - The method of substitution

5.5: 1 - 36, 38 - 73, 85, 86