
Multivariable Calculus

Math 212 Spring 2015

Fowler 309 MWF 9:35am - 10:30am

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<http://faculty.oxy.edu/ron/math/212/15/>

Worksheet 23

TITLE Review for Exam 2

CURRENT READING McCallum, Section 14.6-14.8, Chapter 15, Chapter 16 (Not 16.6)

HW #8 (DUE TUESDAY 4/7/15 5PM)

McCallum, *Section 16.3*: 2, 5, 6, 28, 39, 40, 41, 42, 54*, 55*.

McCallum, *Chapter 16.4*: 3, 7, 8, 17, 20, 22.

McCallum, *Chapter 16.5*: 12, 13, 14, 15, 21, 22, 23, 63*, 73.

McCallum, *Chapter 16 Review*: 1, 4, 10, 11, 12, 14, 20, 23, 55*, 56*.

SUMMARY

This worksheet reviews the concepts that you need to be responsible for on Exam #2.

Here are the titles of the last 12 Worksheets in this class.

*** means Exam 2 will not cover this material**

Worksheet 11 *The Chain Rule*

Worksheet 12 *Second-Order Partial Derivatives*

Worksheet 13 *Review for Exam 1**

Worksheet 14 *Differentiability of a Multivariable Function*

Worksheet 15 *Local Extrema of a Multivariable Function*

Worksheet 16 *(Unconstrained) Optimization of a Multivariable Function*

Worksheet 17 *Multivariable Constrained Optimization (Using Lagrange Multipliers)*

Worksheet 18 *(Integration of a Multivariable Function*

Worksheet 19 *Iterated Integration*

Worksheet 20 *Triple Integrals*

Worksheet 21 *Evaluating Multiple Integrals Using Other Coordinate Systems*

Worksheet 22 *The Calculus of Curves In Space**

Here are the in-class activities covered

Surface Activity 3 *The Roller Coaster (Lagrange Multipliers)*

Here are the titles of the Quizzes we have done so far in the class

Quiz 6 *Multivariable Chain Rule*

Quiz 7 *Unconstrained Multivariable Optimization*

BONUS 2 *Multivariable Optimization Using Lagrange Multipliers*

Quiz 8 *Double and Triple Integrals*

BONUS 3 *Fubini's Theorem for Iterated Integrals*

Here are the Chapters we have covered in the textbook, *Calculus : Multivariable (6th Edition)*, so far

*** means Exam 2 will not cover this material**

Section 14.6 *The Chain Rule*

Section 14.7 *Second-Order Partial Derivatives*

Section 14.8 *Differentiability*

Section 15.1 *Critical Points*

Section 15.2 *Optimization*

Section 15.3 *Constrained Optimization: Lagrange multipliers*

Section 16.1 *Definite Integral Of A Function Of Two Variables*

Section 16.2 *Iterated Integrals*

Section 16.3 *Triple Integrals*

Section 16.4 *Double Integrals in Polar Coordinates*

Section 16.5 *Integrals in Cylindrical or Spherical Coordinates*

Section 17.1 *Parametrized Curves**

Section 17.2 *Motion, Velocity and Acceleration**

GROUPWORK

What topic(s) are the most unclear right now?

Which topic(s) do you have the most confidence in answering questions on?