

MA153 Lesson 14

LESSON 14 - Functions of Several Variables

16 September, 2008

Outline

- 1 Admin
- 2 Last Class
 - Last Class Homework Help
 - Technical Writing
- 3 Functions of Several Variables
 - Course Guide
 - Domain and Range
 - Numerically describe a function of two or more variables
 - Graphically describe a function of two or more variables
 - Homework Help
- 4 Look Forward

Admin

- 1 Homework 3 is posted and due 22 September - Next Monday

Admin

2 Project Questions - Teams?

Admin

3 FCE Bonus is graded

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Homework Help

Questions? - Homework Help

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Technical Writing

Questions?

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- 1 Represent a function of two or more variables verbally, numerically, algebraically, and visually.
- 2 Understand that a function of two or three variables is a rule assigning a real number to every point in its domain.
- 3 Determine the domain and range of a function of two or more variables.
- 4 Sketch the level curves and horizontal traces of a function of two variables.

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Domain and Range

Domain defines the values the independent values can take on

Range defines the values the function can achieve

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Numerically

Table Look Up!

Numerically

Table Look Up! Board Work - Problem 2 page 866

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Graphically

- 1 Find the intercepts by setting the other two variables to zero.
- 2 Contour Plots.

Graph Board Work

Using Mathematica and by hand
Problem 6 Page 866 a-d and plot the function

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Homework Help

Look Forward

Limits and Continuity - 14.2

- 1 Understand the idea of points being "close" in \mathbb{R}^2 and \mathbb{R}^3 .
- 2 Determine the limit of a function of two variables.
- 3 Determine whether a function of two variables is continuous at a point.
- 4 Understand the different behavior possible when determining limits and continuity for a multi-variable function.
- 5 HOMEWORK PROBLEMS: 4, 8, 16, 29

Questions?

Questions?