MATH 120

Fall 2013

Week 1

- Go over syllabus
- Function, domain and range: HW P. 21, # 2, 12, 23
- Go over in class: P. 87, # 1
- HW P. 87: # 2, 7
- Be able to explain graphically: Average Velocity and Instantaneous Velocity
- Practice skills test -- distribute

- Randomly pick students to put on board: selected homework problems-P. 21 and p. 87.
- Def 1 on p 88
- Left and right hand limits of a function – what is the difference?
- Can the limit of a function exist at a point if the left and right hand limits are not equal at that point? Explain with a diagram.
- Draw diagram of a function where the limit = +infinity as the independent variable approaches a point. Draw diagram of a function where the limit = -infinity as the independent variable approaches a point. Explain.
- When is a line a vertical asymptote of a curve? Explain. Draw diagrams.
- Be able to put on board and explain without notes: limit problems
- HW: p.96: # 1, 2, 4, 7, 8, 9, 10. I will randomly select students to put selected problems on the board.
- Limit laws: 1 – 5 on page 99 and 6 – 10 on page 101
  State in your own words what theorems 1, 2, and 3 mean

- HW p. 106: #1, 2, 3, 10, 13, 15, 19, 23.

- Be able to explain on board, without notes, limit problems
- Due: forM onday, catch up on what we worked on this week and come in with questions.

- Answer any questions on practice skills test

Week 2

- Go over any questions on assignments.

- Choose students randomly to explain HW

- Choose students randomly to explain homework problems on page 96.

- Have students work on other problems together and then put on board.

- Answer any questions.
- Start work on formal definition of LIMIT.
- HW for next week Page 117: #1, 2, 3, 4, 5, 6, 7, 11

SEPTEMBER 13:

BASIC SKILLS ASSESSMENT

Week 3

Answer questions on homework due: Section 2.4: Page 117: # 1, 2, 3, 4, 5, 6, 7, 11

Work on section 2.4 and section 2.5 -- **Continuity**

DUE: HW**:** Page 117: 5, 6, 7, 11 **:** HW:Page 128: # 1, 2, 3, 4, 5, 6, 7, 10, 13, 16

Section 2.5:

F(x) is continuous at x = a if 3 things occur:

1. F(a) exists
2. Lim of F(x) as x approaches a exists.
3. The above two quantities are equal.

Come up with examples of functions:

- 1 holds and 2 does not
- 2 holds and 1 does not
- 1 and 2 hold and 3 does not

READ and UNDERSTAND: Def 2 – p 121

Def 3 – p 121

Ex 4 – p 121

Theorems 4, 5, and 7 - pages 122 and 124

INTERMEDIATE VALUE THEOREM – page 126

Answer questions on sections 2.4 and 2.5 problems -- page 128

Work on sections 2.5 and 2.6.

Section 2.6

READ AND UNDESTAND: Definitions 1, 2, 3 pages 131 and 132

Theorem 5 -- page 133

Example 3 – page 133

Example 9 – page 137

Definition 9

HW: page 140: 1, 3, 5, 9, 15, 17, 19

QUIZ # 1 ON SECTIONS 2.1, 2.2, 2.3, 2.4 AND MATERIAL COVERED IN SECTION 1.1

Week 4:

Answer questions on quiz given.

Work on section 2.6 and problems assigned on page 140.

Work on concepts and skills in Section 2.7: tangents, derivatives, instantaneous rate of change, velocity.

Start working on page 150: #1, 3, 5, 7, 10, 12, 14, 15, 25, 27.

Work on problems assigned.

Section 2.8: Derivatives as functions:

HW; Page 162: # 1 to 11, 35 – 38.

Quiz # 2: sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 and material in section 1.1.

Week 5

Work on all sections.

Review problems on page 165: #1, 2, 5, 7, 8, 9, 11, 12

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Review.

Test # 1: Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8 and material in section 1.