

MATH 15.1 ELEMENTARY SET THEORY, LOGIC & PROBABILITY  
SPRING 2005

Mon., Wed. & Fri. 10:10 - 11:05 AM  
Adams Hall

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Office hours: Mon. & Fri. 11:10 - 11:40 AM, and by appointment,  
in Room 100B Adams Hall.

Text: Finite Mathematics , 8th Ed., by Lial, Greenwell & Ritchey

Syllabus: Chapters 6, 7 & 8. We will generally assign 2 new sections of  
the text per week. Each student will present 2 HW problems at the board  
during the semester.

Calculators with  $yx$  or  $^{\wedge}$  buttons (for calculating powers) will prove useful.

Exams: There will be 2 half-hour quizzes worth 50 points each and 2 full  
period exams worth 100 points each. The final will be 2 hours and is  
worth 150 points. We will review exam material the class before that  
exam is given. Normally make-ups aren't given. Returned exam papers, all  
handouts, as well as your class notes and HW should be preserved and  
easily available.

Quiz #1: Fri., Feb. 11    Logic

Test #1: Fri., Mar. 11    Logic & Sets

Quiz #2: Fri., Apr. 8    Probability

Test #2: Mon., May 2    Counting & Probability

Final: Fri., May 20 or possibly Mon., May 16

Success in class depends, of course, on exam grades, and is invariably  
enhanced by participation in class, good attendance, timely HW,  
consistency of work habits, working alone and with study friends, and use  
of the Math Tutoring Center in room 106A of Adams Hall when necessary.  
Getting to know several students in class is a good idea-- you can study  
together, prepare for exams, call each other with a question or to catch  
up on missed work.

No class on Mon., Feb. 21 (Presidents' Day), from Mar. 23 thru Apr. 3 (Spring Break) and on Apr. 25 (Passover). The last day to withdraw from the course with a W is Feb. 16. The last day to apply for a P/D+/D/F grade is Mar. 7. The last day of class is Wed., May 11.

Your grade in the course is calculated from your exam average after your lowest quiz grade or 1/2 a test grade is dropped. Conversion from numerical average to letter grade: 93 and above = A, below 93 thru 90 = A-, below 90 thru 87 = B+, below 87 thru 83 = B, below 83 thru 80 = B-, ... etc..., below 70 thru 67 = D+, below 67 thru 60 = D, below 60 = F.

HW Assignments: Read the intros to each chapter (6, 7, 8) as you come to them.

You may skip the portions of text referring to calculators.

## LOGIC

6.1 Ex. odd #ed from 1-21; every 5th from 25-65; 69-71.

6.2 3, 5, 7, 9, 15, 23, 25, 29, 35, 37, 44c, 49.

6.3 1, 3, 8, 11, 13, 15, 17, 19, 23, 27, 33, 34, 37, 43, 46, 47, 49, 51, 55, 61, 63, 67, 71, 77, 79, 87, 94.

6.4 1, 5, 17, 23, 25, 27, 31, 37, 41, 45.

6.5 1, 5, 7, 11, 13, 17, 21, 23, 27, 39, 41.

6.6 1, 3, 5, 7, 11, 15, 21, 23, 27, 29, 33, 37, 41, 43-50.

Extended Application Ex. 1.

## SETS AND PROBABILITY

7.1 1, 5, 9, 11, 17, 21, 23, 25, 31, 33, 41, 45, 53, 59, 61, 63.

7.2 1, 3, 5, 11, 13, 15, 19, 21, 23, 25, 27, 31, 33, 35, 55.

7.3 3, 7, 9, 13, 17, 19, 23, 25, 31, 33, 35, 39, 40, 42, 54.

7.4 1, 3, 5, 9, 11, 13, 15, 17, 19, 21, 25, 30, 35, 43, 47, 72.

7.5 1, 3, 5, 7, 11, 15, 17, 19, 26, 27, 45, 67.

7.6 1-8, 28, 34-36.

Ext. Appl. Ex. 1-3.

## COUNTING, FURTHER PROBABILITY

8.1 Every 4th problem (1, 5, 9, ...) from 1 to 25 and 35 to 51.

8.2 " 1 to 25 and 39 to 47.

8.3 " 1 to 29 and 39 to 55.

- 8.4 “ 1 to 21 and 33 to 45.  
8.5 “ 1 to 25 and 39 to 51.

Selected sections from Chap. 9, time permitting