Math s21 - Day Six (Tuesday, May 1, 2007)

9:00-10:20

A. Students present homework problems 3 and 4 from page 53.
B. Groups of 2 practice with worksheet #1.
C. Groups present worksheet answers on the board.
D. Same pairs begin worksheet #2.

10:20-10:35 Break

10:35-11:30

E. Pairs continue worksheet #2.
F. Each pair trades its worksheet #2 with another pair; pairs grade each other's worksheet.
G. Pairs read - carefully! - through section 2.6. Also consider The Berry Paradox, given on page 55 as Question to Ponder #5.

11:30-11:55 LaTeX

11:55-1:00 Lunch

1:00-3:00

H. Finish any remaining work from Chapter 2.
I. New groups of 3 read Section 3.1 and work through worksheet #3.
J. Groups present worksheet exercises at the board.

New Key Ideas Today

power set
paradox
The Axiom of Induction
Principle of Mathematical Induction
base case
induction step
induction hypothesis

LaTeX Assignment for This Week

Typeset the following:

"Suppose A and B are subsets of some set U. Use an element argument to show that $A \cap B^{\complement} = \emptyset$ if and only if $A \subseteq B$."

Homework

1. #8, page 55
2. Give an inductive definition for each of the following:
   i.) $\{n : n = 2^k \text{ for some } k \in \mathbb{N}\}$;
   ii.) a set formed as a geometric progression $\{a, ar, ar^2, ar^3, ...\}$.

Sections to Discuss Wednesday

3.2, 3.3