


*SOCIology 201:*  
*Social Research Design*



**13. Sampling Examples**

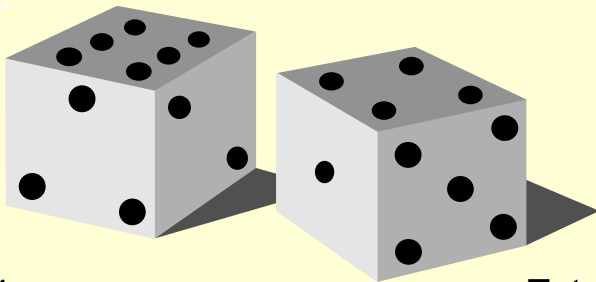
# Preview



- Review Chap 7 Workbook Assignments
- Sampling examples
  - Medical school faculty members
  - Episcopal Churchwomen
  - University students
  - Oakland, CA households
- Mid-Term Review Sheet

# 7.1: Simple Random Sample

- Select random numbers from table
- Those people are in the sample



# 1.2: Stratified Systematic Sample

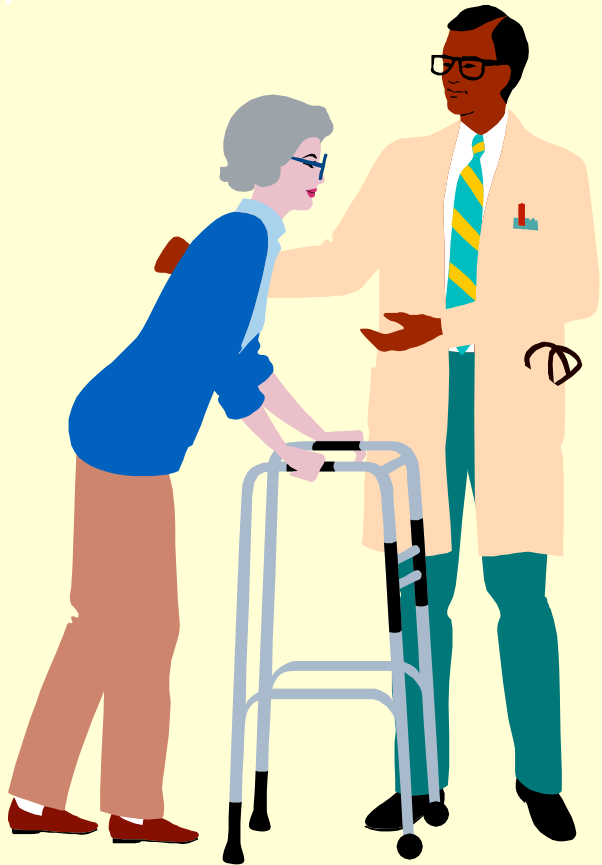
- Stratify list by gender
- Sampling interval is  $72/10 = 7.2$
- Pick random number between 1 and 7
- Take every 7th name afterward





# Examples of Sample Designs

# Medical School Faculty in Medicine and Pediatrics

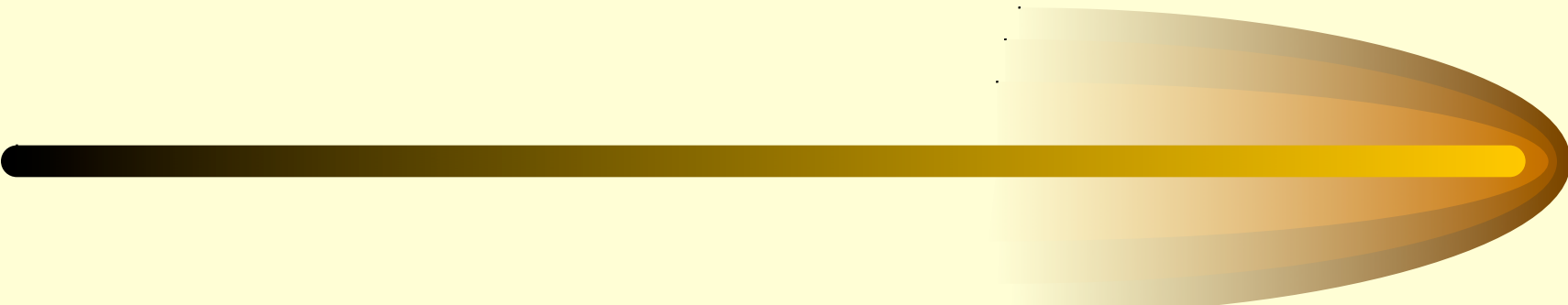


- 84 4-year medical colleges at time of study
- Population and sample size
  - Estimated 12,000 faculty in Medicine and Pediatrics
  - Figured 2000 (1/6) would be enough

# Medical School Faculty

- Selecting schools
- Geographical stratification
- Random start 1-6
- Picked 14 schools
- Not all deans cooperated
  - *(Project diary to follow)*





August 16: Letters sent to the 14 medical school deans, introducing the project and requesting permission to survey their faculties.

August 23: School A replied, approving the study.

August 30: Schools B and C approved the study; School D refused.

August 31: Selected School D' as replacement and wrote to dean.

September 13: School E approved the study.

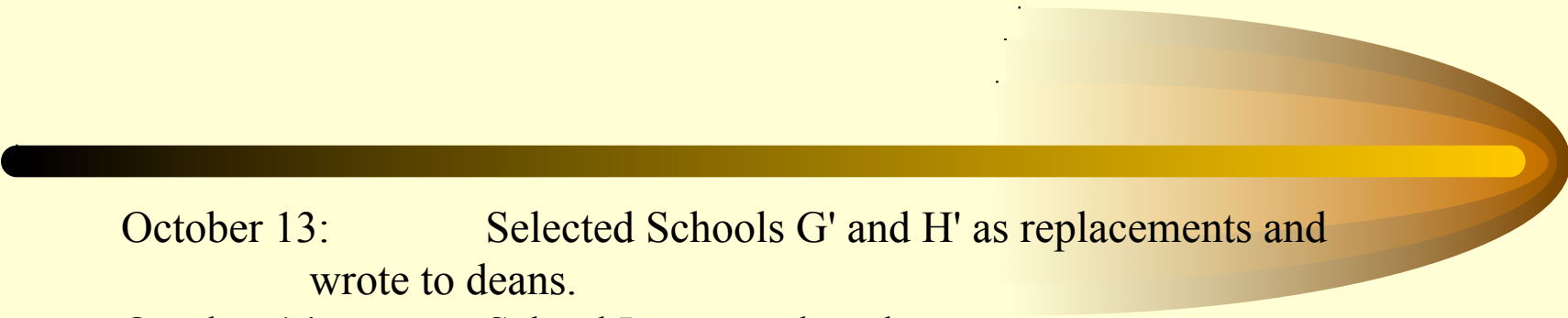
September 20: School F approved the study.

September 21: Sent follow-up letters to nonresponding deans.

October 7: Called nonresponding deans; assured that answers would follow.

October 12: Schools G and H refused.



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- October 13: Selected Schools G' and H' as replacements and wrote to deans.
- October 14: School I approved study.
- October 15: Called School E requesting faculty list not yet received.
- October 20: School I refused; selected School il as replacement and wrote to dean.  
Wrote to School I requesting faculty list.
- October 22: School K refused; selected School K' as replacement and wrote to dean.
- October 27: School W approved the study.
- November 2: School D' refused.
- November 8: Received faculty list from School E.
- November 19: School G' approved the study.
- November 24: School K' approved the study-

# Episcopal Churchwomen



- Wanted 500 respondents
  - 25 churches with 20 women each PPS
  - $N = 200,000$   
 $SI = 8000$

# Church Selection

- | <b>Church</b> | <b>Size</b> | <b>From</b> | <b>To</b> | <b>Picks</b> |
|---------------|-------------|-------------|-----------|--------------|
| • Church A    | 5,000       | 1           | 5,000     | 4,000        |
| • Church B    | 2,000       | 5,001       | 7,000     |              |
| • Church C    | 3,000       | 7,001       | 10,000    |              |
| • Church D    | 8,000       | 10,001      | 18,000    | 12,000       |
| • Church E    | 1,000       | 18,001      | 19,000    |              |
| • Church F    | 4,000       | 19,001      | 23,000    | 20,000       |
| • Church G    | 6,000       | 23,001      | 29,000    |              |
| • etc.        |             |             |           |              |

# *Episcopal Churchwomen*

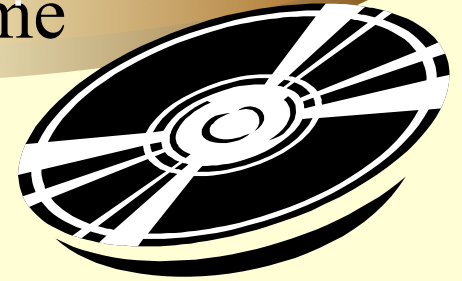


- Sampling within churches
- Discuss bad estimates of church size
- Automatic weighting

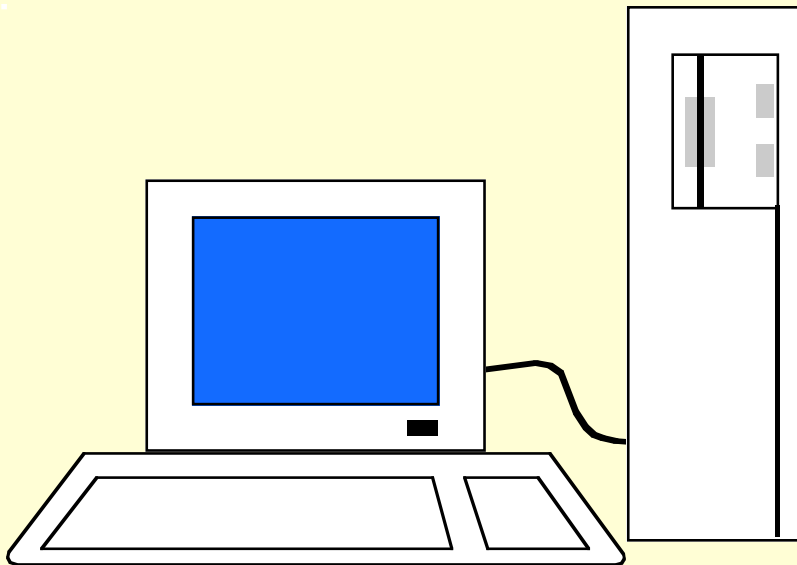


# Sampling University Students

- Survey population and sampling frame
  - Magnetic registration tape
  - It contained too many people
- Survey population defined as
  - 15,225 day program degree candidates registered for the Fall semester on the Manoa campus--both undergraduate and graduate, American and foreign
- **DISCUSSION:** What decisions would we have to make at Chapman?



# Sample selection program



- Stratified tape by class; could have done more
- Chose  $n$  of 1100
- Systematic selection of  $1/14$

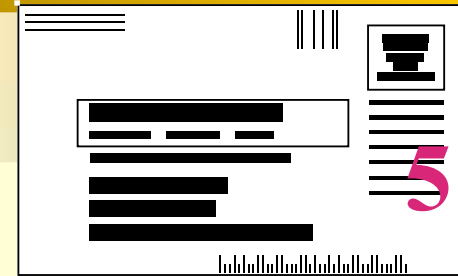
# Printed 6 labels per student



1st envelope



2nd envelope



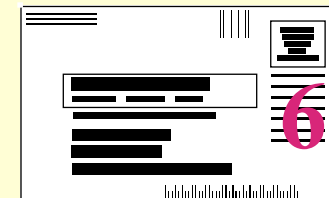
3rd envelope



1st postcard



2nd postcard



3rd postcard

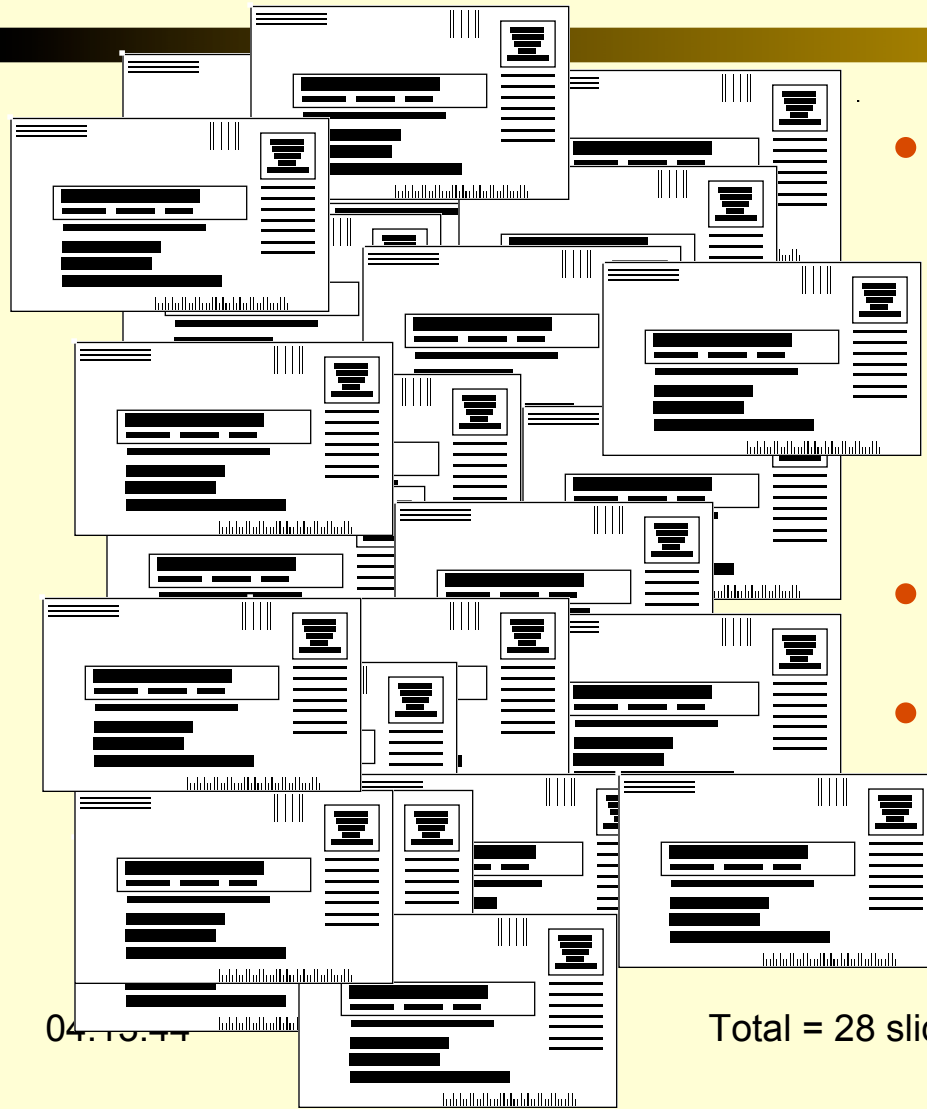
# Sample modification



- Questionnaires and postage too expensive
- Systematically threw away 1/3 of labels



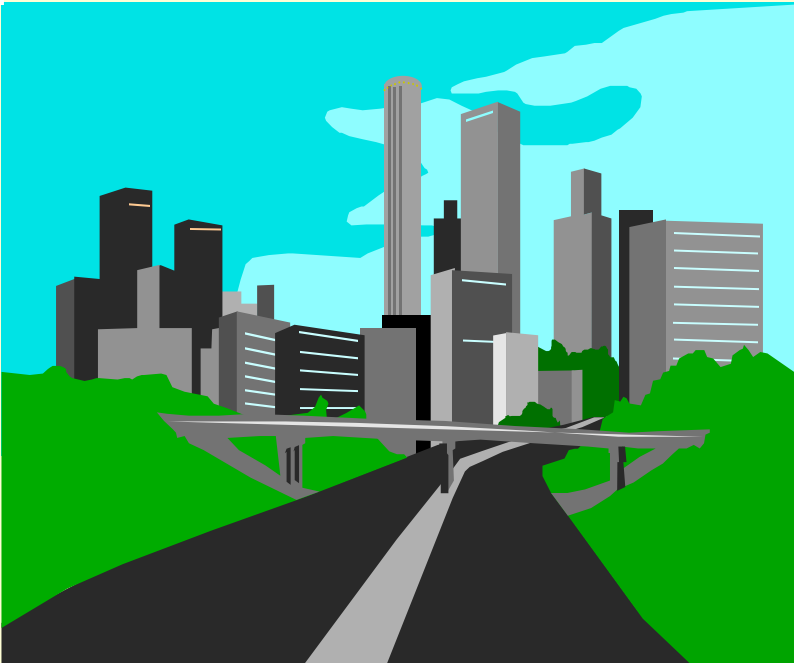
# Processing of returns



- Postcards began coming in
- Throw away those mailing labels
- Wrong order!
- Reorganized the labels

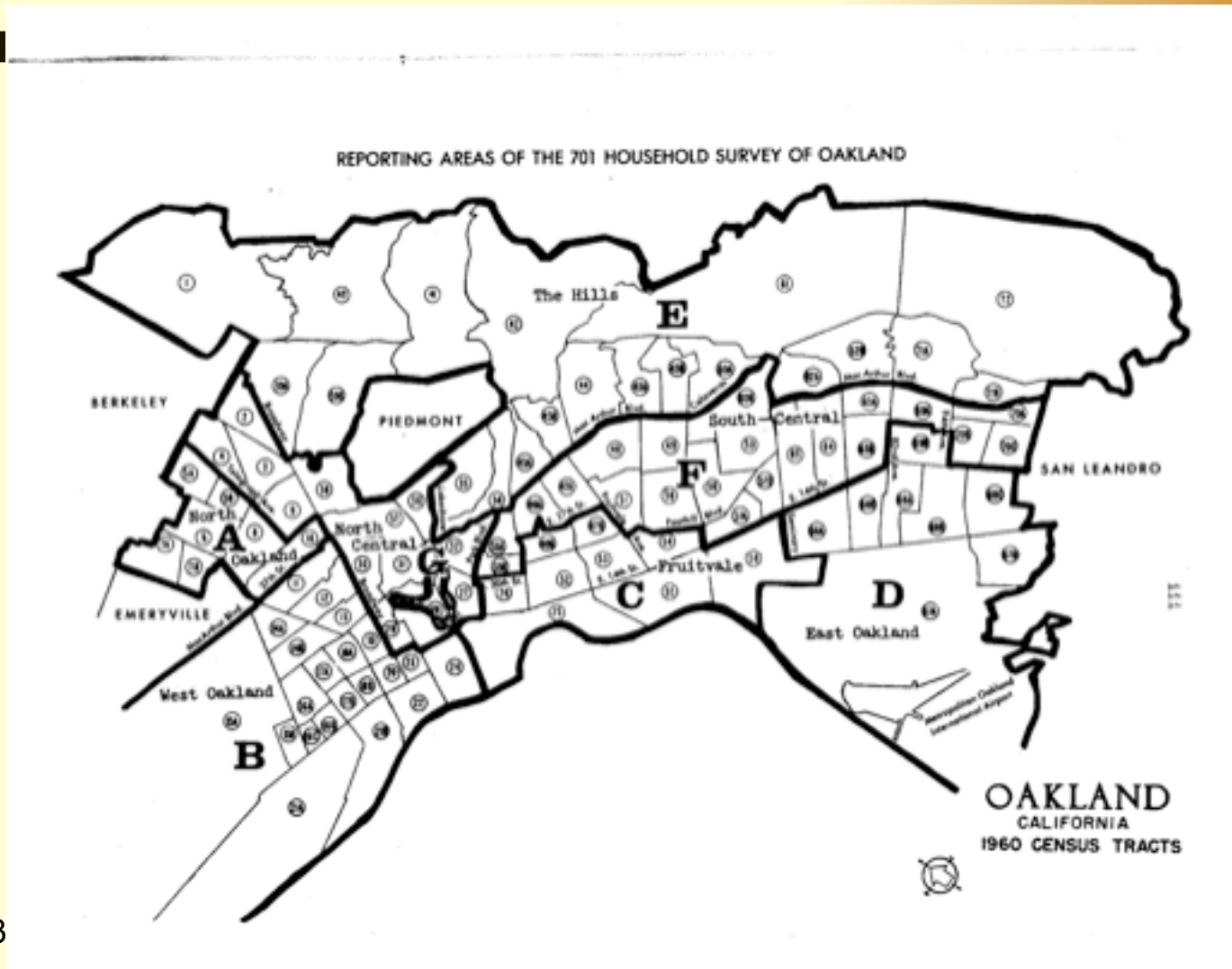
Total = 28 slides

# Multi-stage cluster sample



- Oakland, CA
- Model Cities Program
- Unemployment 6% or more
  - Risk of underestimating
  - Create sample design

# Seven areas of city

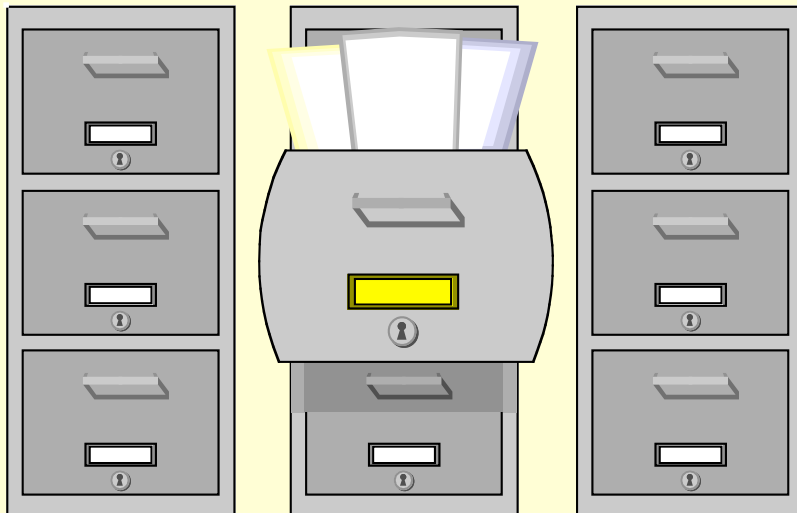


# Overall Design

- 500 households from each area
  - n of 3500 in city
- 100 blocks with 5 hh each
- 2 blocks from each of 50 homogeneous

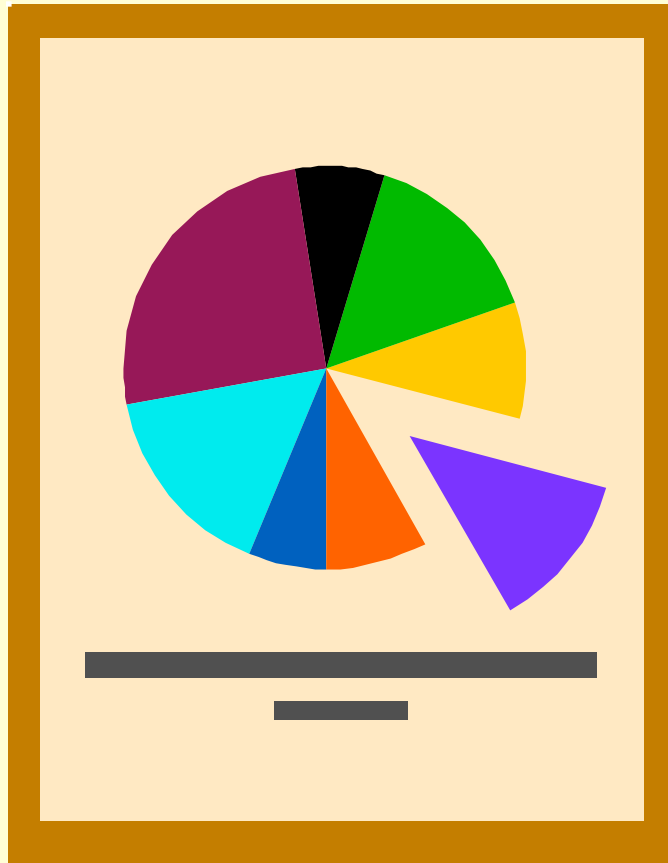


# Data for Stratification



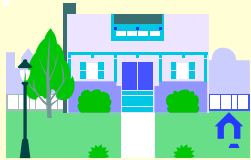
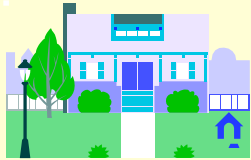
- 1960 census data
- Building and demolition permits

# Stratification Variables

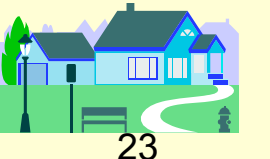


- Growth since census
- Percent nonwhite
- Percent renter-occupied
- Percent deteriorating
- Value of structures
  - rent or assessment
- Process of stratification

# Selecting the households

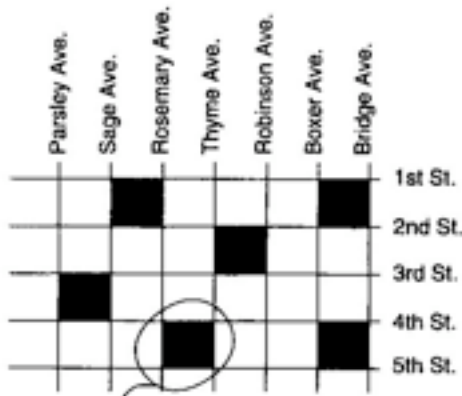


- Listing the blocks
- Household selection within blocks
- Weighting the responding households



*Another view*

# SELECTING Households



Stage One: Identify blocks and select a sample. (Selected blocks are shaded.)

Stage Two: Go to each selected block and list all households in order. (Example of one listed block.)

1. 491 Rosemary Ave.
2. 487 Rosemary Ave.
3. 473 Rosemary Ave.
4. 455 Rosemary Ave.
5. 437 Rosemary Ave. \*\*
6. 423 Rosemary Ave.
7. 411 Rosemary Ave.
8. 403 Rosemary Ave.
9. 1101 4th St.
10. 1123 4th St.
11. 1137 4th St. \*\*
12. 1157 4th St.
13. 1169 4th St.
14. 1187 4th St.
15. 402 Thyme Ave.
16. 408 Thyme Ave.
17. 424 Thyme Ave. \*\*
18. 446 Thyme Ave.
19. 458 Thyme Ave.
20. 480 Thyme Ave.
21. 498 Thyme Ave.
22. 1186 5th St.
23. 1174 5th St. \*\*
24. 1160 5th St.
25. 1140 5th St.
26. 1122 5th St.
27. 1118 5th St.
28. 1116 5th St.
29. 1104 5th St. \*\*
30. 1102 5th St.

Stage Three: For each list, select sample of households. (In this example, every sixth household has been selected starting with #5, which was selected at random.)

Pick sample of blocks  
List households  
Sample from lists



# Review Sheet for Mid-term



# *Next Time*



- Review for Mid-term
- Review Chapters 1-7