

Warm-Up

1. If 20 people are selected from a group of 75 to answer certain questions, how large is the sample? 20 people
2. In probability, what do the words "equally likely" mean? same probability
3. If you pull 1 out of 10 slips of paper with different names written on them out of a box, what is the probability of selecting any particular name? $1/10$
4. What is the probability of drawing 1 red marble out of a bag containing 3 red, 4 blue, and 5 green marbles? $3/12$ or $1/4$



1-3 Sampling Methods

Integrated 2



1-3 Sampling Methods

1. Choices are made independent of each other. Each equally likely to happen.
Random
2. Sample consists of items in a group. Group may be chosen at random. Not a random sample because items in group are not chosen independently of each other. **Cluster**
3. Choices are made to make the selections easy for the researcher. **Convenience**
4. Population divided into subgroups. Individuals chosen randomly from subgroups. **Stratified Random**
5. Sample obtained using an ordered list of population, then selecting systematically from the list. Starting point on list is usually random.
Systematic

Biased Sampling

A sample that overrepresents or underrepresents part of a population is biased.

Example 1

The drama teacher wants to know how students feel about acting. The teacher randomly chooses 100 boys and 100 girls for the survey.

- Classify as random, convenience, stratified random, cluster or systematic. Explain.
- Are any groups likely to be underrepresented?

It is stratified random - subgroups, boys and girls.
No, no group is underrepresented.

Random, stratified random, and systematic are usually preferred since they are good representations of the population.

Example 2

The owner of a business employing people in 5 departments of about equal size, wants to know what her employees think about working more than 35 hours per week. She asks people in the sales department what they think.

- a. Classify the sample and explain your choice.
- b. Will the owner really know what her employees think? Why?

Stratified
Random, Convenience, Cluster

- a. Cluster
- b. No, what about the other departments.

1-3 Sampling Methods

Homework

- Read pg. 16-19
- Pg. 20 #6-14, 18-20, 24-26
- Practice 3 #1-8