

AP Statistics | Sampling and Study Design Unit Overview

Sampling

- Identify the population in a sampling situation.
- Recognize bias due to voluntary response samples and other inferior sampling methods.
- Use Table B of random digits to select a simple random sample (SRS) from a population
- Recognize the presence of undercoverage and nonresponse as sources of error in a sample survey.
- Recognize the effect of the wording bias on survey data.
- Use random digits to select a stratified random sample from a population when the strata are identified.

Study Design

- Recognize whether a study is an observational study or an experiment
- Recognize bias due to confounding of explanatory variables with hidden variables in either an observational study or an experiment.
- Identify the factors (explanatory variables), treatments, response variables, and experimental units or subjects in an experiment.
- Outline the design of a completely randomized experiment using a diagram. The diagram in a specific case should show the sizes of the groups, the specific treatments, and the response variable.
- Use Table B of random digits to carry out the random assignment of subjects to groups in a completely randomized experiment.
- Recognize the placebo effect. Recognize when the double-blind technique should be used.
- Recognize a block design and when it would be appropriate. Know when a matched pairs design would be appropriate and how to design a matched pairs experiment.
- Explain why a randomized comparative experiment can give good evidence for cause-and-effect relationships.

Date	Day	Topic	Assignment
10/24	#1	Designing Samples & Types of Sampling (4.1)	HW #1: Page 229 #1, 2, 4, 5, 7, 8, 9 Page 230 #11, 12, 13, 15, 18, 19, 22, 28, 32, 35, 36
10/26	#2	Rolling Down the River Lab Sampling	HW #2: Page 233 #37-44
10/30	#3	Designing Experiments (4.2)	HW #3: Page 258 #45-49, 52, 54, 55, 59, 63, 65
11/01	#4	Double-Blind/Blocking/Matched Pairs (4.2)	HW #4: Page 260 #62, 66, 67, 69, 75, 78, 79, 82
11/05	#5	Quiz #4	No Homework! You're welcome ☺
11/07	#6	Using Studies Wisely (4.3)	Activity: Design a Study HW #5: Page 264 #87-96
11/14	#7	Test Review	Review Packet & STUDY!!
11/16	#8	Additional Review Day	
11/20	#9	Sampling Study Design Test	HW Packet #3 Due