

➤ **Observational Study or Experiment?**

1. Which of the following is an observational study and which is an experiment?  
(a) A teacher announces a study session to be held the night before a test. The teacher lists the students who attended the session and compares their scores to the remaining AMDM students' scores.

observational study

- (b) To determine whether a review session will improve his students' test scores, a teacher divides his class into two groups. He then requires one group to attend a study session and compares the test results of each group.

experiment

➤ **Population and Sample, Parameter and Statistic**

2. The mean income of all subscribers to a particular magazine is \$26000. We draw a random sample of 100 subscribers and find that their mean income is \$27300. Identify the

(a) population: all subscribers

(b) sample: 100 subscribers

(c) parameter: \$26,000

(d) statistic: \$27,300

3. The average GPA for all female volleyball players in a particular college is 2.8, and their mean height is 182cm. Identify the parameter or statistic if there is any.

parameter

➤ **Types of Sampling**

4. Which sampling method was utilized? Why?

- (a) Student organization looking to get signatures for a petition camp out in front of Class of 1950 Lecture Hall.

Convenience

- (b) Select three students from a class to receive ice cream by putting all the students' names in a hat and picking out three names randomly.

## Simple random

- (c) Select three female students and three male students to receive ice cream by putting all the men's names in one hat and all the women's names in a different hat and picking out three names from each hat.

## Stratified

- (d) In Fall 1995, the BBC in Britain requested viewers to call the network and indicate their favorite poem.

## CONVENIENCE

- (e) Divide the class into four groups (freshman, sophomore, junior and senior) and take a random sample of two students from each group.

## Stratified

- (f) Priceline.com randomly e-mails a Customer Satisfaction Survey for certain transactions done on its site in which customers choose to either respond or not.

## CONVENIENCE

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