

Name Key Class _____ Date _____

Practice

Form K

2-7

Samples and Surveys

Identify the sampling methods used in each of the following situations. Then state whether the sampling method has any bias.

1. A television station invites viewers to call in and name their favorite game show.

Self selected Bias: only people who watch TV and that show will call.

2. A school principal gathers an alphabetical list of all the students at her school. Then she selects every 15th student to take a survey about the cafeteria's lunch menu.

Systematic no bias

3. A reporter asks people leaving a movie theater to take a survey about their television viewing habits.

Convenience

Bias: only opinions from movie goers.

4. A psychologist uses a computer program to randomly select names from a list of students at a university. The members of the sample will take a survey about student housing at the university.

Random

no bias

5. Writing A group of television producers plans to survey 10-year-olds to determine their opinions about a new cartoon. Describe a sampling method that could be used to gather a biased sample in this situation. Then describe a method to gather an unbiased sample.

Bias: self selected → ask for volunteers
unbiased: systematic → get alphabetical list from elementary school of all 10-yr olds, ask every 4th kid.

6. Multiple Choice A school psychologist sits in a school cafeteria and takes notes on students' behavior while they eat lunch. Which of the following types of studies is the researcher conducting?

A controlled experiment

B observational study

C survey

7. Open-Ended Your classmate is randomly selecting a sample of students at his high school to take a survey. You say that your classmate's sample is biased because it only contains high-school students. In what case might you be wrong?

If the survey asks questions directly related to students at that particular school.

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at that particular school.