

## Review for Mastery

LESSON

### **H** Populations and Samples

Survey topic: number of books read by seventh-graders in Richmond

A <b>population</b> is the whole group that is being studied.	<i>Population:</i> all seventh-graders in Richmond
A <b>sample</b> is a part of the population.	<i>Sample:</i> all seventh graders at Jefferson Middle School
A <b>random sample</b> is a sample in which each member of the population has a random chance of being chosen. A random sample is a better representation of a population than a non-random sample.	<i>Random sample:</i> Have a computer select every tenth name from an alphabetical list of each seventh-grader in Richmond.
A <b>biased sample</b> is a sample that does not truly represent a population.	<i>Biased sample:</i> all of the seventh graders in Richmond who are enrolled in honors English classes.

Tell if each sample is biased. Explain your answer.

1. An airline surveys passengers from a flight that is on time to determine if passengers on all flights are satisfied.

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2. A newspaper randomly chooses 100 names from its subscriber database and then surveys those subscribers to find if they read the restaurant reviews.

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3. The manager of a bookstore sends a survey to 150 customers who were randomly selected from a customer list.

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4. A team of researchers surveys 200 people at a multiplex movie theater to find out how much money state residents spend on entertainment.

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LESSON **7.1** **Homework and Practice**  
*Populations and Samples*

Identify the population in each situation.

1. The tennis instructor is trying to find a day to schedule practice for the high-school tennis team.  
a. all tennis team members      b. all high-school students
2. The dance committee asks students about their favorite local bands for a middle-school dance.  
a. all students in the school      b. all seventh-grade students in the school
3. A scientist is studying the migration patterns of salmon from fresh water to the ocean.  
a. all salmon in North America      b. all salmon

The manager of a movie theater is conducting a customer survey. For Exercises 4–6, state whether each sampling method is random. Explain.

4. The manager questions 200 moviegoers who were randomly selected as they exited the theater.

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5. The manager questions the first 10 customers each day.

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6. The manager questions all customers between the ages of 10 and 16.

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7. A local radio station is surveying local families about what radio stations they listen to. The station selects families by randomly calling names in the phone book. What is the population? Is the sampling method random? Explain.

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