LESSON **Populations and Samples** 10-1

Practice and Problem Solving: A/B

Name the *population* and the *sample* in each exercise. Explain your answer.

- 1. The number of roadrunners born within a 50-mile radius of Lubbock.
- 2. The cars traveling at 75 kilometers per hour between Beaumont and Lufkin.

Name the sampling method that will best represent the whole
population in each situation. Explain your answer.

3. Student satisfaction with the middle school cafeteria.

Method A: Survey 40 students in two seventh-grade math classes. 72 percent are satisfied with the food in the cafeteria.

Method B: Survey 65 students from a list of all students in the school. 85 percent are satisfied with the food in the cafeteria.

Method best represents the whole population of the school.

4. Predicted winner in an election for town mayor.

Method C: Telephone 100 randomly-chosen voters who live in the town. 54 percent plan to vote for the incumbent mayor.

Method D: Telephone 70 people who have lived in the town for more than 25 years. 45 percent plan to vote for the incumbent mayor.

Method ______ best represents the whole population of the town's voters.

Which of these may be biased samples? Explain your answer.

- 5. A town official surveys 50 people in a library to decide if town residents want the library services and facilities expanded.
- 6. A cable television company randomly calls 200 customers and asks them if they are satisfied with their service.