

Choose a Representative Sample

Statisticians often use **samples** to represent larger groups. For example, television ratings are based on the opinions of a few people who are surveyed about a program. The people surveyed are just part of the whole group of people who watched the program. When using samples, people taking surveys must make sure that their samples are representative of the larger group in order to ensure that their conclusions are not misleading.

ADVERTISING A company that makes athletic shoes is considering hiring a professional basketball player to appear in its commercials. Before hiring him, they are doing research to see if he is popular with teens. Would they get good survey results from taking a survey about the basketball player from each of these surveys?

1. 200 teens at a basketball game of the basketball player's team

- 2. 25 teens at a shopping mall
- 3. 500 students at a number of different middle and high schools

Decide whether each location is a good place to find a representative sample for the selected survey. Justify your answer.

- 4. number of hours of television watched in a month at a shopping mall
- 5. favorite kind of entertainment at a movie theater
- 6. whether families own pets in an apartment complex
- 7. taste test of a soft drink at a grocery store
- 8. favorite teacher in a school cafeteria
- 9. teenagers' favorite magazine at five different high schools