

Name _____ Date _____

Misleading Graphs and Statistics

(Pages 174–177)

When you use a sample to represent a larger group, you must make sure that the people in the sample are fairly representative of the larger group. A graph can also be misleading if the axes are not numbered normally.

EXAMPLE

Decide whether a mall is a good place to find a sample for a survey about the amount of allowance received by people ages 10 to 15.

The mall is probably not a representative place to find a fair sample of people in this age range. Taking a sample at the mall might not represent fairly those people who receive a small allowance, or none.

Try These Together

1. Is a football game a good place to find a representative sample for a survey about favorite sports? Justify your answer.
2. Is a college cafeteria a good place to find a representative sample for a survey about students' major areas of study? Justify your answer.

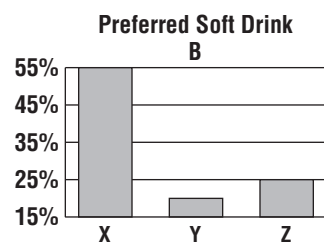
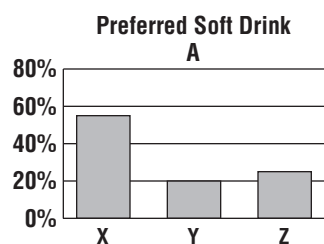
HINT: What are people in the crowd likely to say is their favorite sport?

HINT: Do people of all different majors go there?

PRACTICE

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

3. favorite color at a shopping mall
4. number of pets a family owns at a pet store
5. choice for presidential candidate by phone poll
6. preferred kind of pizza at a library
7. **Marketing** Which of the following graphs is misleading? Explain.



8. **Standardized Test Practice** Which of the following samples would give the best results for a survey of favorite brand of clothing?

- A** teenagers at a factory outlet store **B** women at a designer store
C people at a shopping mall **D** a random telephone survey

Answers: 1–7. See Answer Key for justifications. 1. no 2. yes 3. yes 4. no 5. yes 6. yes 7. B 8. D