

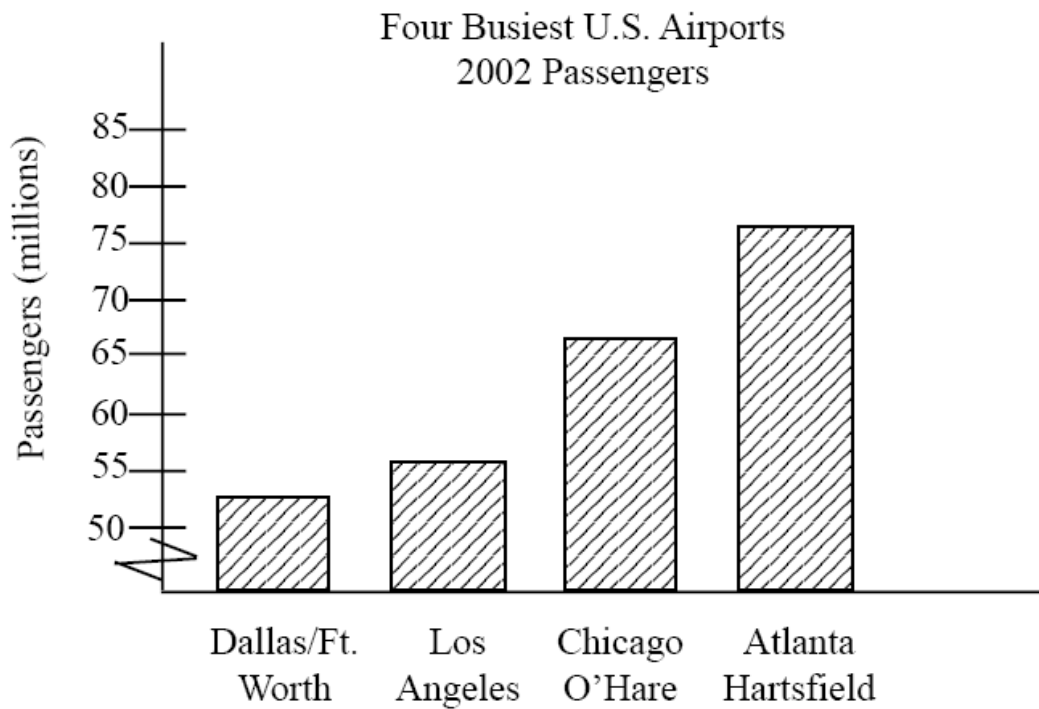
Indicators

Objective:

4.03 Identify misuses of statistical and numerical data.

Vocabulary and Resources		
measures of central tendency	mode	representative sample
mean	range	biased sample
median	outlier	sample size
	sample	scale

A. Explain why the following graph is misleading. Correct the graph so that a more accurate impression of the data is conveyed.



Source: www.infoplease.com

B. The middle school cafeteria manager is considering adding cheeseburgers to the daily menu. He wants to get feedback from a sample population of students and decides to survey the first 10 students in each 8th grade homeroom. Would the data collected be representative of the entire school population? Why or why not?

C. A market researcher randomly selects 12 people to taste-test three leading brands of chips labeled *A*, *B*, and *C*. Of these, six chose brand *A*, three chose brand *B*, and three chose brand *C*. An ad for brand *A* states: "Preferred 2 to 1 over the leading brands". Is this a valid statement? Explain.

D. In a poll taken at a middle school, 38% of the students indicated a preference for rap music, 32% preferred alternative music, and 30% like country music best. A report stated that most of the students at the school liked rap best. Is this an accurate statement? Explain.

E. A small business placed a help wanted ad that stated that its average salary is \$35,800. The actual salaries of the five employees are: \$100,000, \$16,000, \$22,000, \$20,000 and \$21,000. Is this statement about the average salary correct? How might this statement mislead a potential employee?