

### H.O.T. Problems

35. **OPEN ENDED** Create a list of data with at least eight numbers that has an interquartile range of 20 and one outlier.
36. **CHALLENGE** Create two different sets of data that have the same range but different interquartile ranges. Then create two different sets of data that have the same median and same quartiles, but different ranges.
37. **WRITING IN MATH** Explain why the interquartile range is not affected by very high or low values in the data.

## TEST PRACTICE

38. Which of the following statements is never true concerning the measures of variation of a set of data?
- A Half the data lie within the interquartile range.
  - B Three-fourths of the data lie above the lower quartile.
  - C The median, the lower quartile, and the upper quartile separate the data into three equal parts.
  - D 50% of the data lie below the median.
39. High temperatures ( $^{\circ}\text{F}$ ) of twelve cities on March 20 were 40, 72, 74, 35, 58, 64, 40, 67, 40, 75, 68, and 51. Which of the following statements is not supported by these data?
- F Half of the temperatures were below  $61^{\circ}\text{F}$  and half were above  $61^{\circ}\text{F}$ .
  - G The spread of the data is  $40^{\circ}\text{F}$ .
  - H The temperature  $35^{\circ}\text{F}$  is an outlier.
  - J About one-fourth of the temperatures were at or above  $70^{\circ}\text{F}$ .

## Spiral Review

40. **HEIGHTS** The heights, in inches, of the Allen family are 72, 68, 48, 71, and 67. Find the mean, median, mode, and range. Round to the nearest tenth if necessary. (Lesson 9-4)
41. **NATIONAL PARKS** Wyoming has 3,159 square miles of Yellowstone National Park while Montana has 264 square miles and Idaho has 49 square miles. Construct a circle graph to show what part of Yellowstone National Park is in each state. (Lesson 9-3)
42. **FOOD** The Star Theater records the number of food items sold at its concessions. If the manager orders 5,000 food items for next week, approximately how many trays of nachos should she order? (Lesson 8-8)

Number of Food Items Sold at Movie Concessions During the Past Week	
Popcorn	620
Trays of Nachos	401
Candy	597
Slices of Pizza	336

### GET READY for the Next Lesson

**PREREQUISITE SKILL** Graph each set of points on a number line. (Lesson 1-3)

43.  $\{3, 5, 8, 9, 10\}$       44.  $\{13, 15, 20, 27, 31\}$       45.  $\{9, 13, 16, 17, 21\}$       46.  $\{3, 9, 10, 15, 19\}$