### Vocabulary

Choose the best terms from the box to complete the sentence.

1. A **box plot** uses the median, quartiles, lower and upper values, and greatest value of a data set to show the data distribution.

   - box plot
   - distribution
   - lower quartile
   - median
   - upper quartile
   - range

2. The **upper quartile** of a data set is the median of the upper half of the data set.

3. A **measure of variability** is a single value used to describe how spread out a set of data values is.

4. The overall shape of the graph of a data set is known as the **distribution** of the data set.

### Concepts and Skills

5. Aver's test scores are 88, 92, 91, 91, and 82. Marcus's test scores are 89, 92, 92, 90, and 88. Find the mean and standard deviation of each data set and use them to compare the data sets.

   - Aver: mean = 90, range = 8; Marcus: mean = 91, range = 4.
   - Both data sets have the same mean, but Marcus's scores varied less than Aver's scores.

6. The prices for the same DVD at different stores are $11, $10, $13, $12, and $14. Find the mean, median, and mode, and explain which best describes the data.

   - Mean = $12; median = $12; mode = $12; the median or the mode because they have the same value as 4 of the 6 data values.

7. Six tennis sets are six ounces each. Find the range and interquartile range of the data set and explain which better describes the data.

   - Range = 6 ounces; interquartile range = 2 ounces; the range.

8. Alana is drawing a box plot of the data 17, 15, 21, 3, 23, and 11. Where should she draw the vertical line that divides the box? **TE**

   - A: 3
   - B: 11
   - C: 15
   - D: 17
   - E: 21

9. The table below shows the daily high temperatures in degrees Fahrenheit, recorded at Chase's school last week. What is the mean? **TE**

<table>
<thead>
<tr>
<th>Day</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp</td>
<td>70</td>
<td>72</td>
<td>74</td>
<td>75</td>
<td>76</td>
<td>77</td>
</tr>
</tbody>
</table>

   - A: 1°F
   - B: 2°F
   - C: 3°F
   - D: 4°F

10. A biology teacher recorded the number of laps each student walked during class time and displayed the data in the dot plot shown. Which statement is NOT true about the data? **TE**

   - A: The mean and mode are the same value.
   - B: There are no gaps in the data.
   - C: The range is 6.
   - D: The data has a line of symmetry.

### Given Decision Making

### CCSS

- CC.6.SP.2
- CC.6.SP.3
- CC.6.SP.5d
- CC.6.SP.4
- CC.6.SP.5c

### Common Error

- May make an arithmetic mistake when calculating mean and range.
- May use incorrect reasoning when choosing the best measures.
- May miscalculate one or more values needed to draw the plot.
- May make an arithmetic mistake when calculating distances from the mean.
- May incorrectly read the graph.
- May incorrectly identify the minimum or maximum value.
- May miscalculate the lower or upper quartile.
- May use incorrect reasoning when comparing the variabilities.

### Intervene With

- R—13.6; TE—p. 513B
- R—13.5; TE—p. 509B
- R—13.2; TE—p. 495B
- R—13.3; TE—p. 499B
- R—13.1, 13.7; TE—pp. 491B, 517B
- R—13.4; TE—p. 503B
- R—13.4; TE—p. 503B
- R—13.6; TE—p. 513B

### Soar to Success Math

- 55.16–55.19
- 55.16–55.19
- 54.17, 55.19
- 54.17, 54.24
- 55.18, 55.19
- 55.18, 55.19
- 55.16–55.19