Name _____ Date _____ Class _____

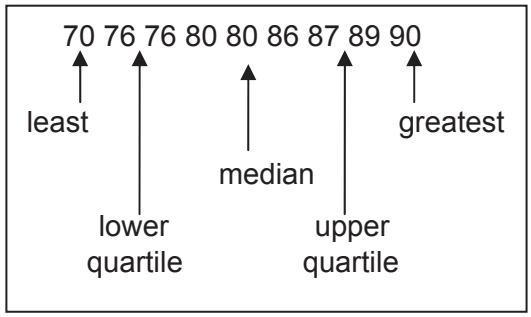
LESSON 16-3

# Box Plots

## *Reteach*

A **box plot** gives you a visual display of how data are distributed.

Here are the scores Ed received on 9 quizzes: 76, 80, 89, 90, 70, 86, 87, 76, 80.



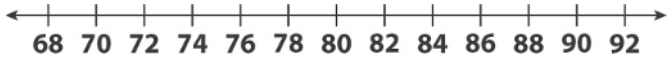

**Step 1:** List the scores in order from least to greatest.

**Step 2:** Identify the least and greatest values.

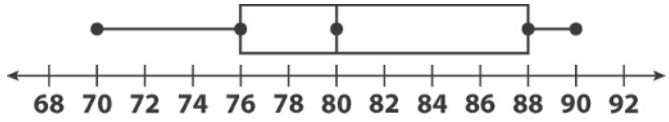
**Step 3:** Identify the median.
If there is an odd number of values, the median is the middle value.

**Step 4:** Identify the lower quartile and upper quartile. If there is an even number of values above or below the median, the lower or upper quartile is the average of the two middle values.

**Step 5:** Draw a number line that includes the values in the given data.



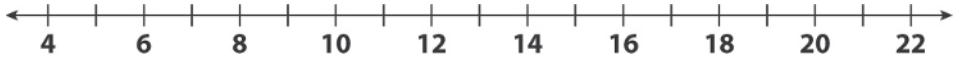

**Step 6:** Place dots above the number lines at each value you identified in Steps 2–4. Draw a box starting at the lower quartile and ending at the upper quartile. Mark the median, too.




**Use the data at the right for Exercises 1–5. Complete each statement.**

| | | |
|---|---|---|
| 20 | 6 | 15 |
| 10 | 14 | 15 |
| 8 | 10 | 12 |

1. List the data in order: _____
2. Least value: _____ Greatest value: _____
3. Median: _____
4. Lower quartile: _____ Upper quartile: _____
5. Draw a box plot for the data.



Name _____ Date _____ Class _____

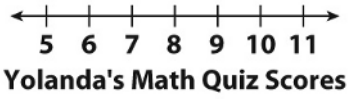
LESSON 16-4

# Dot Plots and Data Distribution

## *Reteach*

A **dot plot** gives you a visual display of how data are distributed.

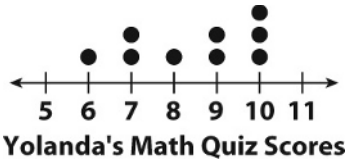
**Example:** Here are the scores Yolanda received on math quizzes: 6, 10, 9, 9, 10, 8, 7, 7, and 10.
Make a dot plot for Yolanda's quiz scores.




**Step 1:** Draw a number line.

**Step 2:** Write the title below the number line.

**Step 3:** For each number in the data set, put a dot above that number on the number line.




Describe the dot plot by identifying the **range,** the **mean,** and the **median.**

**Step 4**: Identify the range. $10 - 6 = 4$

**Step 5**: Find the mean. $76 \div 9 = 8.4$

**Step 6**: Find the median. 9

**Range**: Greatest value − least value

**Mean**: $\frac{\text{Sum of data values}}{\text{Number of data values}}$

**Median**: Middle value

**Use the data set at the right to complete Exercises 1–4.**

| Game Scores | | | |
|---|---|---|---|
| 12 | 6 | 15 | 10 |
| 14 | 15 | 8 | 10 |
| 12 | 21 | 15 | 8 |

1. Draw a dot plot for the data.


2. Find the range. _____

3. Find the mean. _____

4. Find the median. _____

Name _____ Date _____ Class _____

LESSON 16-5

# Histograms

*Reteach*

Histograms can be used to display data. Use intervals of 10.

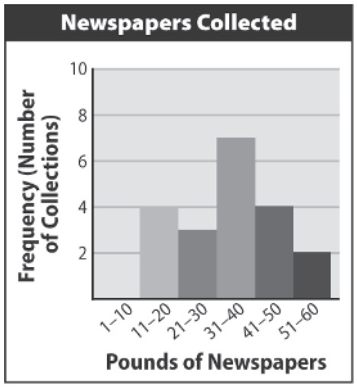
**Pounds of Newspapers Collected for Recycling**

| | | | | |
|---|---|---|---|---|
| 12 | 28 | 24 | 32 | 35 |
| 31 | 38 | 55 | 43 | 52 |
| 42 | 49 | 18 | 22 | 15 |
| 47 | 37 | 19 | 31 | 37 |

**Pounds of Newspapers**

| Interval | Frequency |
|---|---|
| 1–10 | 0 |
| 11–20 | 4 |
| 21–30 | 3 |
| 31–40 | 7 |
| 41–50 | 4 |
| 51–60 | 2 |

A **histogram** is a bar graph in which the bars represent the frequencies of the numeric data within intervals. The bars on a histogram touch, but do not overlap.




**Use the histogram to complete Exercises 1–4.**

1. Which interval has the greatest number of collections?

_____

_____

2. Were there any collections of less than 11 pounds? Explain your answer.

_____

_____

3. Which display can you use to find the median? _____

4. What is the median of the data? _____