Name _____ Date _____ Class _____

LESSON 17-1

Measures of Center

Success for English Learners

Problem 1

Steps to find the mean, or average, of a data set.

Add.

Each number

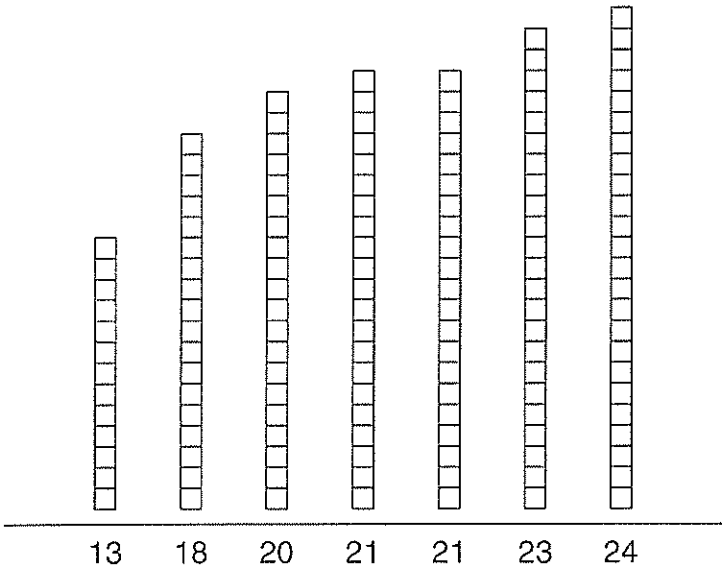
1. Find the sum of the data values.

Count each number.

2. Divide the sum by the number of data values.

Problem 2

Use a visual model to examine the data.



The **median** is the middle value of an ordered data set.

The **mean** is the average.

$$\frac{\text{sum of data values}}{\text{number of data values}} = \frac{13+18+20+21+21+23+24}{7} = \frac{140}{7} = 20$$

1. What is an "ordered data set"?

_____

2. How do you find the median if there are an even number of data values?

_____

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Name _____ Date _____ Class _____

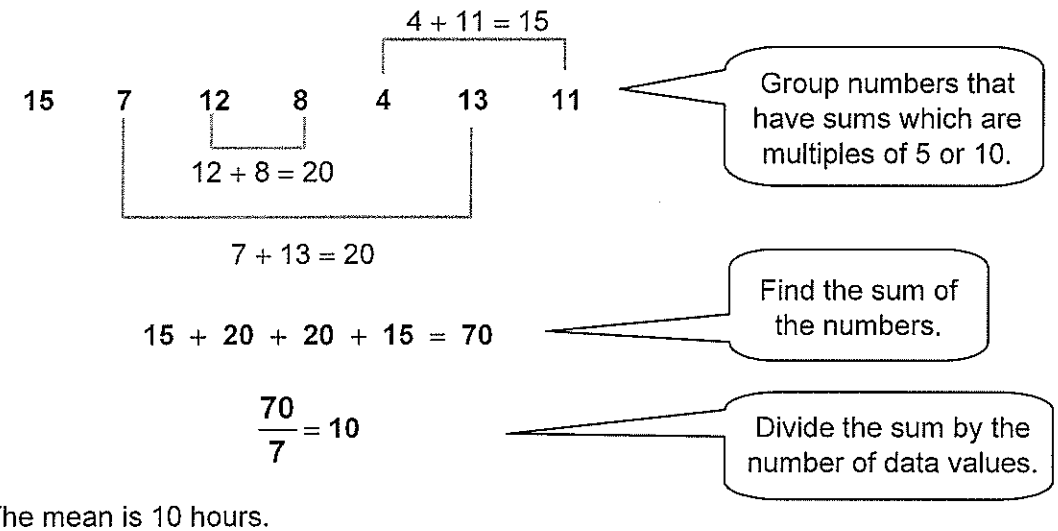
LESSON 17-1

Measures of Center

Reteach

When calculating the mean, you can use *compatible numbers* to find the sum of the data values. Compatible numbers make calculations easier. For example, adding multiples of 5 or 10 is easier than adding all of the individual data values.

A group of students are asked how many hours they spend watching television during one week. Their responses are: 15, 7, 12, 8, 4, 13, 11. What is the mean?



The mean is 10 hours.

Use compatible numbers to find the mean.

1. The costs (in dollars) of items on a lunch menu are 9, 14, 11, 6, 16, 10.

   Mean: _____

2. The numbers of students in Mr. Silva's math classes are 19, 18, 22, 24, 20, 18, 26.

   Mean: _____

3. In the television viewing data above, is there more than one way to pair the data values to form compatible numbers? Explain.

   _____

   _____

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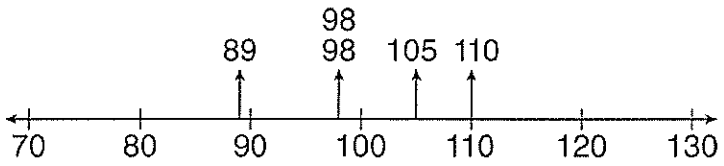
LESSON 17-1

Measures of Center

Reading Strategies: Use Graphic Aids

Tim's bowling scores from 5 different games are 89, 98, 110, 98, 105. The scores are shown on the number line below. The number line is a graphic aid that lets you see whether the scores are close together or spread apart.



Use the bowling scores above to complete Exercises 1–3.

1. Are the bowling scores close together or spread out? _____
2. Find the mean and the median bowling scores.

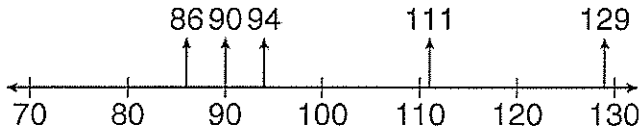
   Mean: _____ Median: _____

3. Does one measure describe the data better than the other? Explain.

_____

_____

The number line below shows Pranav's bowling scores from 5 different games. The scores, shown on the number line, are: 94, 90, 111, 86, 129. Use the number line to complete Exercises 4–6.



4. Are the bowling scores close together or spread out? _____
5. Find the mean and the median bowling scores.

   Mean: _____ Median: _____

6. Does one measure describe the data better than the other? Explain.

_____

_____

7. Explain why you think the mean and median are called "measures of center."

_____

_____

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Name _____ Date _____ Class _____

LESSON 17-1

Measures of Center

Practice and Problem Solving: A/B

Use the situation below to complete Exercises 1–4.

The heights (in inches) of the starting players on a high school basketball team are as follows: 72, 75, 78, 72, 73.

1. How many starting players are there? _____
2. What is the mean height? _____
3. What is the median height? _____
4. Does one measure describe the data better than the other? Explain.

   _____

In Exercises 5–7, find the mean and median of each data set.

5. Daily high temperatures (°F): 45, 50, 47, 52, 53, 45, 51

   Mean: _____ Median: _____

6. Brian's math test scores: 86, 90, 93, 85, 79, 92

   Mean: _____ Median: _____

7. Players' heart rates (beats per minute): 70, 68, 70, 72, 68, 66, 65, 73

   Mean: _____ Median: _____

8. Hikers spent the following amounts of time (in minutes) to complete a nature hike: 48, 46, 52, 57, 58, 52, 61, 56.

   a. Find the mean and median times.

      Mean: _____ Median: _____

   b. Does one measure describe the data better than the other? Explain.

      _____

   c. Suppose another hiker takes 92 minutes to complete the hike. Find the mean and median times including this new time.

      Mean: _____ Median: _____

   d. Does one measure describe the data better than the other now? Explain.

      _____

      _____

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Name _____ Date _____ Class _____

LESSON 17-1

Measures of Center

Practice and Problem Solving: C

Find the mean and median of each data set.

1. Monthly rainfall (in inches): 7.6, 6.7, 8.1, 6.2, 6.0, 6.2

   Mean: _____ Median: _____

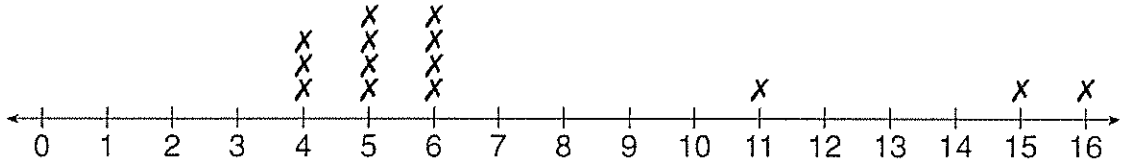
2. Dylan's weekly earnings (in dollars): 200, 167, 185, 212, 195, 193, 188, 140

   Mean: _____ Median: _____

3. Fundraising calendars sold per person: 22, 13, 47, 11, 8, 16, 15, 14, 13, 17

   Mean: _____ Median: _____

The line plot below shows the number of kilometers Clara ran each day for 14 days. Use the line plot for Exercises 4 and 5.



4. Find the mean and median for the data.

   _____

5. Does one measure describe the data better than the other? Explain.

   _____

   _____

In Exercises 6 and 7, use the given measure to find the missing value in each data set.

6. The mean of the ages of 5 brothers is 13 years.

   12, 16, ☐, 14, 8

7. The median number of students in each music class is 19 people.

   16, ☐, 24, 17, 20, 21

8. Write a data set where both the mean and the median describe the data equally well. Explain your reasoning.

   _____

   _____

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LESSON 17-1

Measures of Center

Practice and Problem Solving: D

Use the situation below to complete Exercises 1 and 2. The first step in Exercise 1 is done for you.

The heights (in meters) of the trees in a park are as follows:
7, 11, 9, 7, 6, 8.

1. Follow the steps to find the mean.
   a. Find the sum of the data values.

      48

   b. Divide to find the mean.

      $$\text{Mean} = \frac{\text{sum of data values}}{\text{number of data values}} = \frac{\square}{\square} = \square$$

      The mean height is _____.

2. Follow the steps to find the median.
   a. Write the data values in order from least to greatest.

      _____, _____, _____, _____, _____, _____

   b. Find the middle value.

      The data set has two middle values: _____ and _____.

      $$\text{Median} = \frac{\square + \square}{\square} = \frac{\square}{\square} = \square$$

      The median height is _____.

The points scored by a football team in each game are shown in the table. Use this data to complete Exercises 3–5. The first one is done for you.

Game	Points Scored
1	7
2	20
3	24
4	17
5	28
6	24

3. How many data values are there?

   6

4. What is the mean and median?

   Mean: _____

   Median: _____

5. Does one measure describe the data better than the other? Explain.

   _____

   _____

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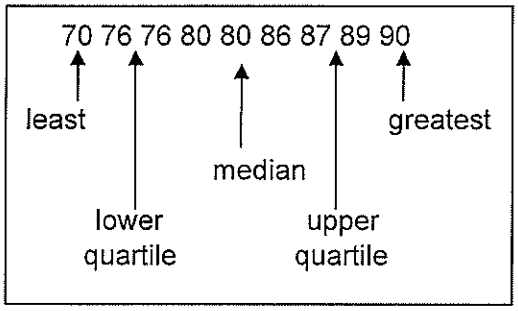
LESSON 17-2

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.



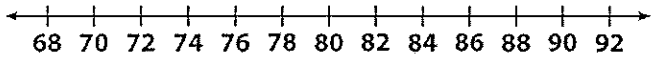
Step 1: List the scores in order from least to greatest.

Step 2: Identify the least and greatest values.

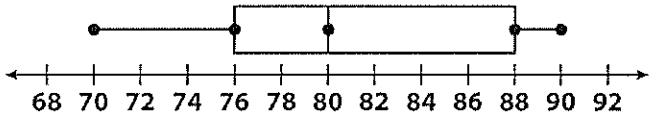
Step 3: Identify the median. If there is an odd number of values, the median is the middle value.

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.

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LESSON 17-2

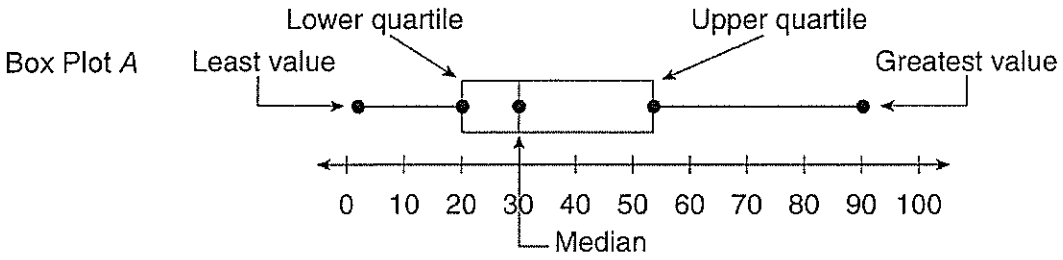
Box Plots

Success for English Learners

A **box plot** shows a set of data divided into four equal parts.

Problem 1

A box plot shows how the values in a data set are distributed or spread out.



Problem 2

To make a box plot, start by putting the data in order from least to greatest.

Identify the least and greatest values. In box plot *A*, the least value is 2 and the greatest value is 90.

Identify the middle value. This is the **median**. The median for box plot *A* is 30.

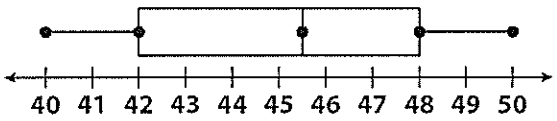
Identify the lower quartile. The **lower quartile** is the middle value between the least value and the median. In box plot *A*, the lower quartile 20.

Identify the upper quartile. The **upper quartile** is the middle value between the median and the greatest value. In box plot *A*, the upper quartile 53.

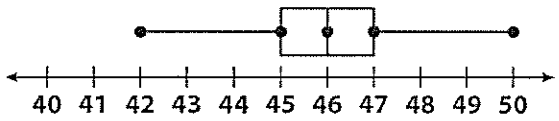
Plot each identified value on a number line and draw a box from the lower quartile to the upper quartile with a line drawn at the median. Draw a line segment from the least value to the lower quartile and from the upper quartile to the greatest value.

Use box plot *B* and box plot *C* to complete the table.

Box Plot *B*



Box Plot *C*



		Median	Least Value	Greatest Value	Lower Quartile	Upper Quartile
1.	Box Plot *B*					
2.	Box Plot *C*					

3. Which box plot has the middle half of the data closer together? _____

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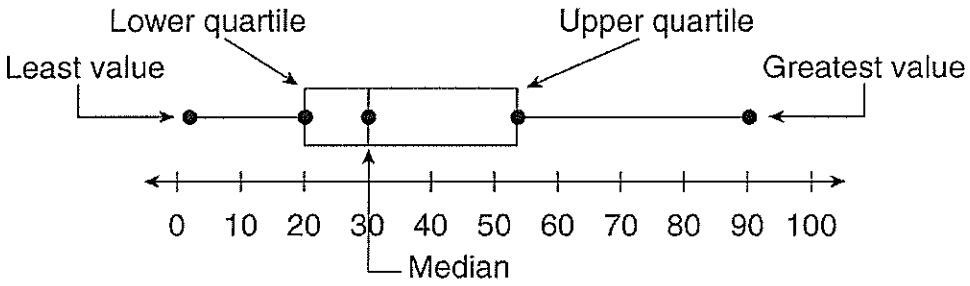
LESSON 17-2

Box Plots

Reading Strategies: Use Graphic Aids

A **box plot** shows a set of data divided into four equal parts called **quartiles.**



- The median score divides the set of data in half. The median score for this plot is 30.
- The box shows the middle half of the data, located on either side of the median. The box extends from 20 to 53.
- The two "whiskers" identify the remaining half of the data. One whisker extends from the box to the greatest value: from 53 to 90. The other whisker extends from the box to the least value: from 2 to 20.

Answer each question.

1. What does the box stand for in a box plot?

   _____

2. How are the whiskers determined?

   _____

   _____

3. Why is it important to find the median score?

   _____

Describe where these scores are located in the box plot above.

4. 18 is between the _____ and the _____.
5. 75 is between the _____ and the _____.
6. 45 is between the _____ and the _____.

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LESSON 17-2

Box Plots

Practice and Problem Solving: A/B

The high temperatures for 2 weeks are shown at the right. Use the data set for Exercises 1–7.

High Temperatures						
69	73	72	66	64	64	61
70	78	78	74	69	61	62

1. Order the data from least to greatest.

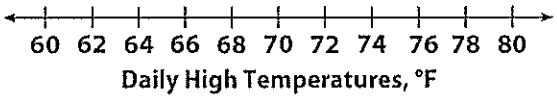
_____

2. Find the median. _____

3. Find the lower quartile. _____

4. Find the upper quartile. _____

5. Make a box plot for the data.



6. Find the IQR. _____

7. Find the range. _____

Use the situation and data given below to complete Exercises 8–10.

Two classes collected canned food for the local food bank. Below are the number of cans collected each week.

Class A: 18 20 15 33 30 23 38 34 40 28 18 33

Class B: 18 27 29 20 26 26 29 30 24 28 29 28

8. Arrange the data for each class in order from least to greatest.

Class A: _____

Class B: _____

9. Find the median, the range, and the IQR of each data set.

Class A: median: _____ range: _____ IQR: _____

Class B: median: _____ range: _____ IQR: _____

10. Compare and contrast the box plots for the two data sets.

_____

_____

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Name _____ Date _____ Class_____

LESSON 17-2

Box Plots

Practice and Problem Solving: C

Use the data set at the right for Exercises 1–3.

A math test had 50 questions. The data set shows how many questions were answered correctly in one class.

Questions Correctly Answered									
48	50	48	40	42	42	47	48	48	41
40	48	43	49	50	43	47	43	42	44

1. What is the first step you need to do to make a box plot? Complete that step now.

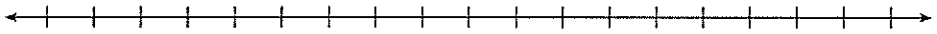
_____

_____

2. Find the median, the range, and the IQR of the data set.

median:_____ range:_____ IQR:_____

3. Make a box plot for the data.



Questions Correctly Answered

Use the situation below to complete Exercises 4–7.

Below are the prices of various rooms at two different resort city hotels.

Hotel A: 360 100 180 220 240 200

Hotel B: 300 250 180 80 120 340 220

4. Make box plots for each set of data.

Hotel A

Hotel B

Comparative Room Rates

5. Which hotel has the greater median room price? _____

6. Which hotel has the greater interquartile range of room prices? _____

7. Which hotel appears to have more predictable room prices? Explain.

_____

_____

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LESSON 17-2

Box Plots

Practice and Problem Solving: D

Weekly Earnings ($)
20 12 10 6 12 15 8 15

The data set at the right shows the money Joe earned in 8 weeks. Use the data set to complete Exercises 1–7. The first one is done for you.

1. Order the data from least to greatest.

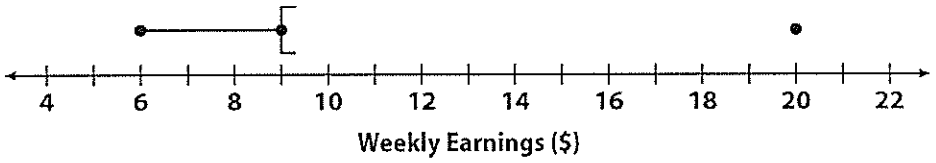
   6, 8, 10, 12, 12, 15, 15, 20

2. Find the median. _____

3. Find the lower quartile. _____

4. Find the upper quartile. _____

5. Complete the box plot for the data.



6. Find the IQR. _____

7. Find the range. _____

Use the situation and data given below to complete Exercises 8–11.

Below are the number of books read each week for Juan and Mia.

Juan: 2, 6, 4, 1, 2, 6, 8, 4, 3

Mia: 6, 6, 2, 5, 2, 2, 4, 5, 6

8. Arrange the data for each person in order from least to greatest.

   Juan: _____

   Mia: _____

9. Who had the higher median number of books read? _____

10. Who had the greater range in number of books read? _____

11. Who had the higher IQR in number of books read? _____

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LESSON 17-3

Dot Plots and Data Distribution

Reading Strategies: Build Vocabulary

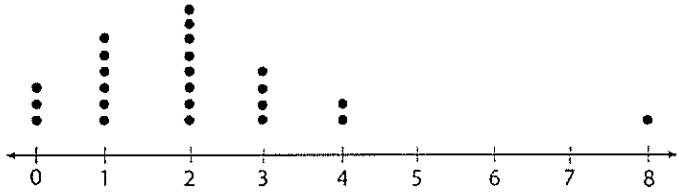
When people study data, they are often asked questions that have a mathematical answer. Some such questions are **statistical**, meaning they have answers that can vary. Some are **not statistical**, meaning they have a single correct answer. For example:

Statistical question: How many books does a typical student read in a week?

Not a statistical question: How many books did Dave read last week?

Statistical questions are answered by collecting and analyzing data.

The data below was collected as an answer to the statistical question above. The data is shown in the dot plot at the right.

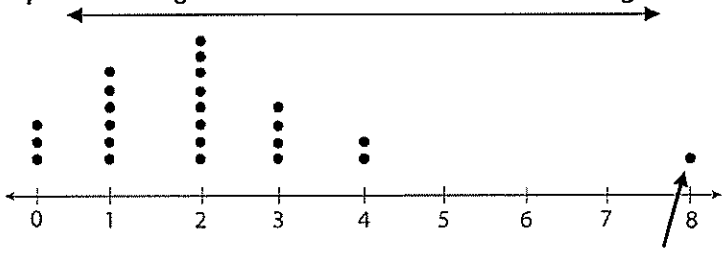


A **dot plot** is a visual way of displaying data.

4	2	1	0	3	2	4	1
1	2	3	8	2	1	0	2
2	3	3	1	1	2	2	0

You can describe the spread, the center, and the shape of a dot plot.

Spread: Range or difference between least and greatest values



Measures of **center**:

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

Median: Middle value

The **shape** of this dot plot is **not symmetrical**, which means there are more dots on one side of the center of the range than on the other side of center.

An **outlier** is a data value much greater or less than other data values.

Mean, median, and range might be affected by an **outlier**.

Use the dot plot above to answer each question.

1. How would you describe the spread of the dot plot?

_____

2. What is the mean? What is the median?

_____

3. What do you think it means if a dot plot is symmetrical?

_____

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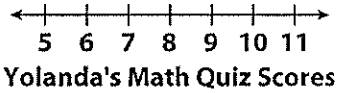
LESSON 17-3

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.

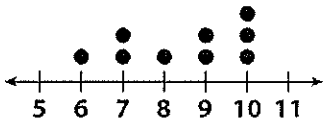


Yolanda's Math Quiz Scores

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.



Yolanda's Math Quiz Scores

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 ÷ 9 = 8.4

Step 6: Find the median. 9

Range: Greatest value – least value

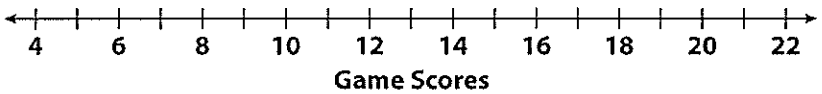
Mean: $\frac{\text{Sum of data values}}{\text{Number of data values}}$

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.



Game Scores

2. Find the range. _____

3. Find the mean. _____

4. Find the median. _____

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LESSON 17-3

Dot Plots and Data Distribution

Success for English Learners

A **dot plot** provides a visual way to display data.

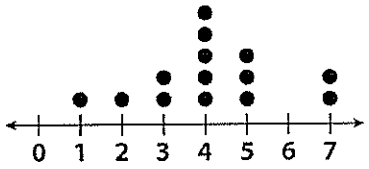
Problem 1

The data below is shown in the dot plot at the right.

Summer Hours I Spent Horseback Riding

1, 7, 4, 3, 5, 4, 2,

7, 4, 4, 3, 5, 5, 4

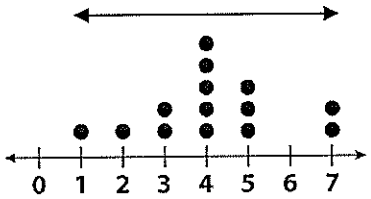


Summer Hours I Spent Horseback Riding

Problem 2

You can describe the spread, the center, and the shape of a dot plot.

Spread: Range or difference between least and greatest values



Measures of **center**:

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

Median: Middle value

The **shape** of this dot plot is **symmetrical**, which means there are about the same number of dots on one side of the center of the range as on the other side of center.

1. How would you describe the spread of the dot plot?

_____

2. Find the mean of the data. _____

3. Find the median of the data. _____

4. What does it mean if the shape of a dot plot is **not** symmetrical?

_____

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Name _____ Date _____ Class _____

LESSON 17-3

Dot Plots and Data Distribution

Practice and Problem Solving: A/B

Tell whether each question is a statistical question. If it is a statistical question, identify the units for the answer.

1. How far do you travel to get to school? _____

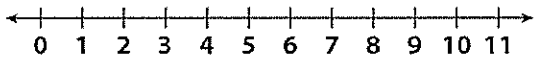
2. How tall is the door to this classroom? _____

Use the data set at the right and the description below to complete Exercises 3–6.

The class took a survey about how many people live in each student's home. The results are shown at the right.

People in Our Homes
4, 2, 5, 4, 2, 6, 4, 3, 4, 3, 5, 6, 2, 7, 3, 2, 5, 3, 4,11, 4, 5, 3

3. Make a dot plot of the data.



People in Our Homes

4. Find the mean, median, and range of the data.

   mean:_____; median:_____; range:_____

5. Describe the spread, center, and shape of the data distribution.

   _____

   _____

6. Which number is an outlier in the data set? Explain what effect the outlier has on the measures of center and spread.

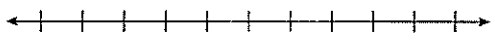
   _____

   _____

7. Survey 12 students to find how many people live in their homes. Record the data below. Make a box plot at the right.

   _____

   _____



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LESSON 17-3

Dot Plots and Data Distribution

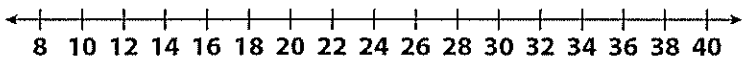
Practice and Problem Solving: C

Use the data set at the right and the description below to complete Exercises 1–4.

The class counted the cars in the parking lot each hour from 9 A.M. to 4 P.M. for 3 days. The results are shown in the data set.

Cars in the Parking Lot
30, 22, 33, 22, 26, 24, 33, 8, 30, 33, 40, 28, 38, 30, 38, 33, 33, 28, 22, 28, 30

1. Make a dot plot of the data.



Cars in the Parking Lot

2. Find the mean, median, and range of the data.

   mean:_____; median:_____; range:_____

3. Describe the spread, center, and shape of the data distribution.

   _____

   _____

4. Which number is an outlier in the data set? Explain what effect the outlier has on the measures of center and spread.

   _____

   _____

Answer the questions below.

5. Write a survey question that you can ask at least 15 people.

   _____

6. Complete your survey. List the results.

   _____

   _____

7. In the blank space at the right, make a dot plot to show the results of your survey.
8. Find each of the following.

   mean:___ ; median:___ ; range:___

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LESSON 17-3

Dot Plots and Data Distribution

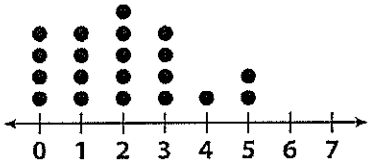
Practice and Problem Solving: D

Use the data set at the right and the description below for Exercises 1–3. The first one is done for you.

The class took a survey about how many dogs and cats each student has. The results are shown in the data set.

Dogs and Cats in Our Homes
1, 0, 3, 5, 1, 3, 2, 4, 2, 1, 2, 0, 5, 3, 1, 2, 0, 0, 2, 3

1. Make a dot plot of the data.



Dogs and Cats in Our Homes

2. Find the mean, median, and range of the data.

   mean:_____; median:_____; range:_____

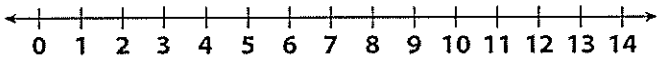
3. Choose the best description of shape of the data distribution.

   A. symmetric B. not symmetric

Answer the questions below.

4. The data set at the right shows the hours that a group of students spent volunteering each weekend. Make a dot plot of the data. Then use your dot plot to complete Exercises 5–7.

Hours Spent Volunteering on Weekends
5, 3, 2, 6, 5, 4, 2, 14, 1, 2



Hours Spent Volunteering on Weekends

5. Find the mean, median, and range of the data.

   mean:_____; median:_____; range:_____

6. Choose the best description of shape of the data distribution.

   A. symmetric B. not symmetric

7. 14 is far away from the other data. What is 14 called? _____

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LESSON 17-4

Stem-and-Leaf Plots and Histograms

Reteach

Both stem-and-leaf plots and histograms can be used to display the same data. When intervals of 10 are used, you can compare the visual results.

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

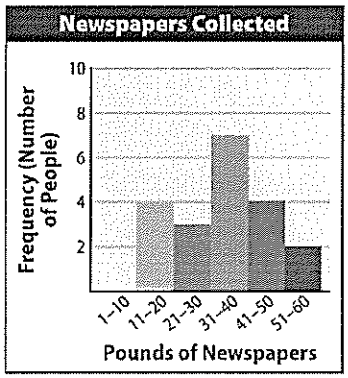
Interval	Frequency
1–10	0
11–20	4
21–30	3
31–40	7
41–50	4
51–60	2

In a **stem-and-leaf plot**, each data value consists of a stem and a leaf. In this case, the tens digit is the **stem** and the ones digit is the **leaf**.

Pounds of Newspapers Collected

Stem	Leaves
1	2 5 8 9
2	2 4 8
3	1 1 2 5 7 7 8
4	2 3 7 9
5	2 5

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 stem-and-leaf plot and histogram to complete Exercises 1–4.

1. How are the stem-and-leaf plot and histogram alike?

_____

_____

2. How do the stem-and-leaf plot and histogram differ?

_____

_____

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

4. What is the median of the data? _____

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Name _____ Date _____ Class _____

LESSON 17-4

Stem-and-Leaf Plots and Histograms

Success for English Learners

Both the **stem-and-leaf plot** and the **histogram** provide a visual way to display data that involves greater numbers.

Problem 1

When you are looking for the individual values in a data set, you can use a **stem-and-leaf plot.**

stem-and-leaf plot

High Temperatures	
Stem	**Leaves**
6	0 5 8
7	2 5 6 7 9
8	1
9	0 6
10	2

Reading the numbers:

9 | 0 6

first digit second digits

So, 9 | 0 6 represents 90 and 96.

Problem 2

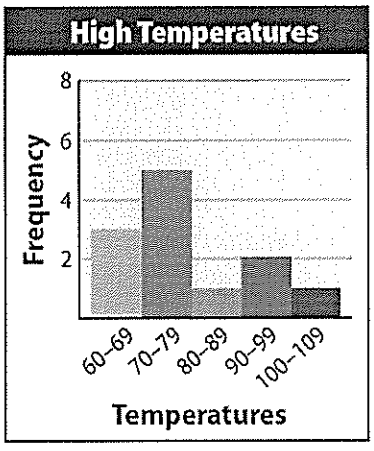
When you are not looking for the individual values in a data set, you can use a **frequency table** or a **histogram.**

frequency table

High Temperatures	
Temperatures	**Frequency**
60–69	3
70–79	5
80–89	1
90–99	2
100–109	1

The data is grouped by intervals instead of individual values.

histogram



1. Which display would you use if being able to identify the median and the mean is important? Explain.

_____

2. What does the shape of the histogram tell you about the high temperatures?

_____

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LESSON 17-4

Stem-and-Leaf Plots and Histograms

Reading Strategies: Compare and Contrast Displays

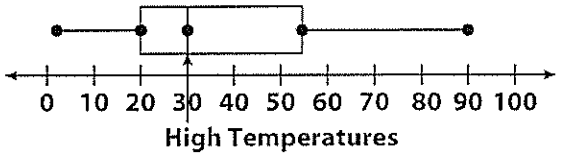
Statistical data can be displayed in different ways. Each of the following displays shows the high temperature on the 15th of each month in one city.

Ordered List

High Temperatures

2 15 18 22 30 30 30 32 45 65 65 90

Line Plot



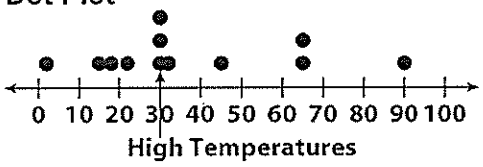
Frequency Table

High Temperatures	
Temperatures	Frequency
0–19	3
20–39	5
40–59	1
60–79	2
80–99	1

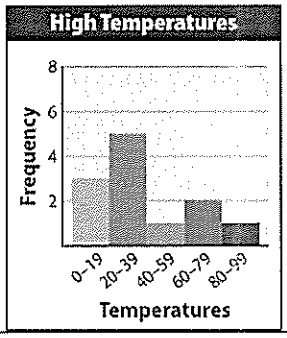
Stem-and-Leaf Plot

High Temperatures	
Stem	Leaves
0	2
1	5 8
2	2
3	0 0 0 2
4	5
5	
6	5 5
7	
8	
9	0

Dot Plot



Histogram



1. Compare and contrast the ability to identify the measures of center with each type of display.

_____

_____

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LESSON 17-4

Stem-and-Leaf Plots and Histograms

Practice and Problem Solving: A/B

Use the data at the right and the description below to complete Exercises 1–6.

The data set lists the heights of the Houston Rockets players during the 2011–2012 basketball season.

Players' Heights						
81	80	79	72	72	78	82
80	80	76	87	65	79	82
80	79	81	71	77		

1. Complete the stem-and-leaf plot for the data.

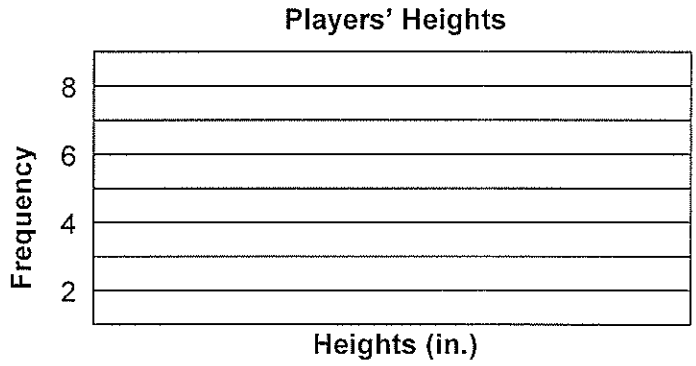
Players' Heights

Stem	Leaves
6	
7	
8	

2. Complete the frequency table. Use an interval of 5.

Players' Heights	
Heights (in.)	**Frequency**
65–69	

3. Complete the histogram.



Solve.

4. Find the range, the median, and the mean of the players' heights.

a. range _____ b. median _____ c. mode _____

5. Based on this data, what do you think is the average height of players in the National Basketball Association? Explain how you decided on your answer including which display of data you used.

_____

_____

_____

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LESSON 17-4

Stem-and-Leaf Plots and Histograms

Practice and Problem Solving: C

Use the data set at the right and the description below to complete Exercises 1–6.

The data set shows a list of the number of students at school each day during the month of January.

Students in School				
281	260	279	253	275
278	255	280	220	266
287	252	279	282	293
277	288	254	256	285

1. Complete the stem-and-leaf plot for the data.

Students in School

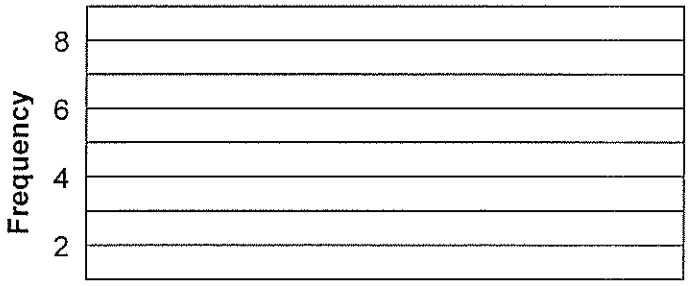
Stem	Leaves
22	
23	
24	
25	
26	
27	
28	
29	

2. Complete the frequency table. Use an interval of 20.

Students in School	
Number	**Frequency**
220–239	

3. Complete the histogram.

Students in School



_____

4. Find the range, the median, and the mean of the data.

Range: _____; Median: _____; Mean: _____

5. Identify the outlier and give a possible explanation for its occurrence.

_____

6. Identify what effect, if any, the outlier has on the measures of center.

_____

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Name _____ Date _____ Class _____

LESSON 17-4

Stem-and-Leaf Plots and Histograms

Practice and Problem Solving: D

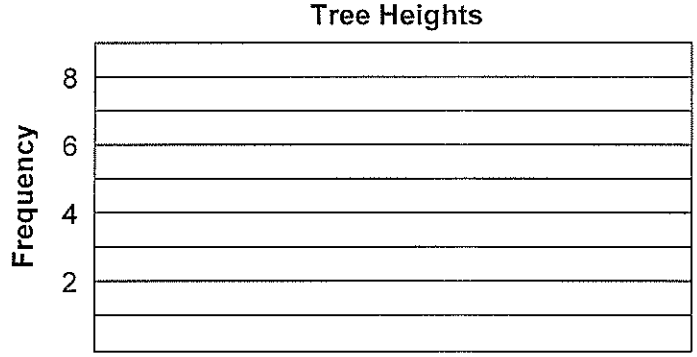
At the right is a list of the heights of trees that are for sale at a nursery. Use the data for Exercises 1–8. The first one is done for you.

Tree Heights							
70	75	65	70	74	64	77	61
77	73	75	79	68	86	79	75

1. Complete the frequency table. Use an interval of 5.

Tree Heights	
Heights (in.)	**Frequency**
60–64	2
65–69	2
70–74	4
75–79	7
80–84	0
85–89	1

2. Complete the histogram for the data.



3. Complete the stem-and-leaf plot for the data.

Tree Heights

Stem	Leaves
6	
7	
8	

Answer the questions below. The first one is done for you.

4. What is the range of the tree heights? 25

5. What is the median of the tree heights? _____

6. What is the mean of the tree heights? _____

7. The nursery wants a sign that tells what trees are available for sale by height. What measure of center would you use for the sign? _____

8. In the space below, make a sign for the trees for sale at the nursery.

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