

## LESSON

**Practice B****6-2****Range, Mean, Median, and Mode**

Find the range, mean, median, and mode of each data set.

1.	<b>School Sit-Up Records</b> (sit-ups per minute)	31	28	30	31	30
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Range                      Mode                      Median                      Mean

2.	<b>Brian's Math Test Scores</b>	86	90	93	85	79	92
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Range                      Mode                      Median                      Mean

3.	<b>Heights of Basketball Players</b> (in.)	72	75	78	72	73
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Range                      Mode                      Median                      Mean

4.	<b>Team Heart Rates</b> (beats per min)	70	68	70	72	68	66
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Range                      Mode                      Median                      Mean

5.	<b>Daily Winter Temperatures</b> (°F)	45	50	47	52	53	45	51
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Range                      Mode                      Median                      Mean

6.	<b>Daily Theater Ticket Sales</b>	68	74	71	69	74	78	70
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Range                      Mode                      Median                      Mean

7. Anita has two sisters and three brothers. The mean of all their ages is 6 years. What will their mean age be 10 years from now? Twenty years from now?

8. In a class of 28 sixth graders, all but one of the students are 12 years old. Which two data measurements are the same for the student's ages? What are those measurements?

## LESSON

**Practice B****6-3****Additional Data and Outliers**

Use the table to answer Exercises 1–2.

1. The table shows population data for some of the least-crowded states. Find the mean, median, and mode of the data.

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2. Alaska has the lowest population density of any state. Only about 1 person per square mile lives there. Add this number to the data in the table and find the mean, median, and mode.

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**Population Densities**

State	People (per mi <sup>2</sup> )
Idaho	16
Nevada	18
New Mexico	15
North Dakota	9
South Dakota	10

Use the table to answer Exercises 3–4.

3. The table shows some of the states with the most counties. Find the mean, median, and mode of the data.

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4. With 254 counties, Texas has more counties than any other state. Add this number to the data in the table and find the mean, median, and mode.

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5. In Exercise 1, which measurement best describes the data? Why is Alaska's population density an outlier for that data set?

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**State Counties**

State	Number of Counties
Illinois	102
Iowa	99
North Carolina	100
Tennessee	95
Virginia	95

6. In Exercise 4, why is the number of counties in Texas an outlier for the data set? Which measurement best describes the data set with Texas included?

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## LESSON

**Problem Solving****6-2 Range, Mean, Median, and Mode**

Write the correct answer.

1. Use the table at right to find the range, mean, median, and mode of the data set.

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2. When you use the data for only 2 of the teams in the table, the mean, median, and mode for the data are the same. Which teams are they?

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3. The states that border the Gulf of Mexico are Alabama, Florida, Louisiana, Mississippi, and Texas. What are the range, mean, median, and mode for the number of letters in those states' names?

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**World Series Winners**

Team	Number of Wins
Baltimore Orioles	3
Boston Red Sox	5
Detroit Tigers	4
Minnesota Twins	3
Pittsburgh Pirates	5

4. There are 5 whole numbers in a data set. The mean of the data is 10. The median and mode are both 9. The least number in the data set is 7, and the greatest is 14. What are the numbers in the data set?

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Circle the letter of the correct answer.

5. If the mean of two numbers is 2.5, what is true about the data?
- A** Both numbers are greater than 5.  
**B** One of the numbers is less than 2.  
**C** One of the numbers is 2.5.  
**D** The sum of the data is not divisible by 2.

6. Tom wants to find the average height of the students in his class. Which measurement should he find?
- F** the range  
**G** the mean  
**H** the median  
**J** the mode

**LESSON**  
**6-3****Problem Solving****Additional Data and Outliers**

Use the table to answer the questions.

1. Find the mean, median, and mode of the earnings data.

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2. *Titanic* earned more money in the United States than any other film—a total of \$600 million! Add this figure to the data and find the mean, median, and mode. Round your answer for the mean to the nearest whole million.

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3. A person in Canada watches an average of 74 minutes of television each day. In Germany, a person watches an average of 68 minutes of TV a day. In France, people watch TV an average of 67 minutes a day. In Spain, the average time watching TV is 91 minutes a day, and in Ireland it is 74 minutes a day. Find the mean, median, and mode of the data.

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**Successful Films in the U.S.**

Film	U.S. Earnings for first release (million \$)
<i>E.T. the Extra-Terrestrial</i>	400
<i>Forrest Gump</i>	330
<i>Independence Day</i>	305
<i>Jurassic Park</i>	357
<i>The Lion King</i>	313

4. People in the United States watch more television than in any other country. Americans watch an average of 118 minutes a day! Add this number to the data and find the mean, median, and mode.

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Circle the letter of the correct answer.

5. In Exercise 2, which data measurement changed the least with the addition of *Titanic's* earnings?
- A the range  
B the mean  
C the median  
D the mode

6. In Exercise 4, which measurements best describe the data?
- F mean and median  
G range and mean  
H median and mode  
J range and mode

**LESSON**
**6-4**
**Practice B**
**Bar Graphs**

Use the bar graph to answer each question.

1. In which country did people spend the most money on toys in 2000?

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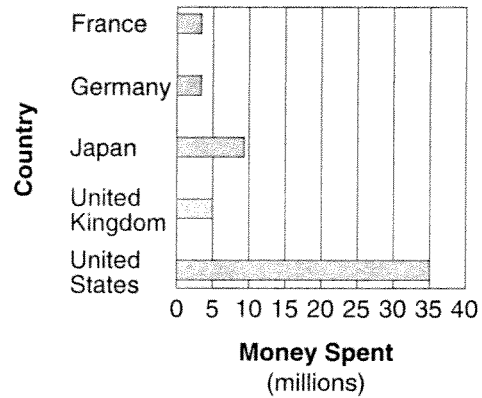
2. In which two countries did people spend the same amount of money on toys in 2000? How much did they each spend?

\_\_\_\_\_

3. In which country did people spend \$9 million on toys in 2000?

\_\_\_\_\_

**Top Toy-Buying Countries, 2000**



Make a double-bar graph to compare the data in the table.

**Female Groups with the Most Top 10 and Top 20 Hits**

Top 10		Top 20	
The Supremes	20	The Supremes	24
The Pointer Sisters	7	The Pointer Sisters	13
TLC	9	TLC	11
En Vogue	5	En Vogue	7
Spice Girls	4	Spice Girls	7

**Female Groups with the Most Top 10 and Top 20 Hits**



**Artist**

Key: Top 10 Top 20

**LESSON**

**6-9 Practice B**

**Stem-and-Leaf Plots**

Complete each activity and answer the questions.

1. Use the data in the table to complete the stem-and-leaf plot below.

Richmond, Virginia, Monthly Normal Temperatures (°F)											
Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
37	39	48	57	74	78	77	76	70	59	50	40

Stem	Leaves

Key: 1 | 2 = \_\_\_\_\_

Find each value of the data set.

- smallest value \_\_\_\_\_
- largest value \_\_\_\_\_
- mean \_\_\_\_\_
- median \_\_\_\_\_
- mode \_\_\_\_\_
- range \_\_\_\_\_

8. Look at the stem-and-leaf plot you made for Exercise 1. How many months in Richmond have a normal temperature above 70°F?

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Stem	Leaves
6	1 4
7	1 6
8	2 2
9	0 1 8

Key: 6 | 5 = 65

9. How would you display a data value of 100 on the stem-and-leaf plot above?

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**LESSON**  
**6-4** **Problem Solving**  
**Bar Graphs**

Use the bar graph for Exercises 1–4.

1. What is the range of the goals the hockey players scored per season?

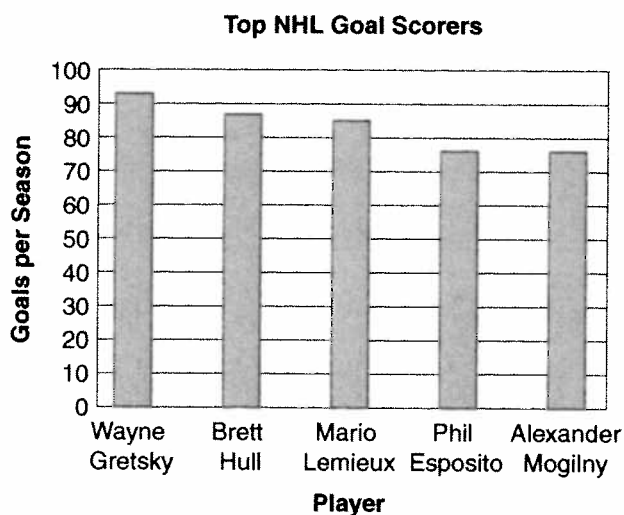
\_\_\_\_\_

2. What is the mode of the goals scored?

\_\_\_\_\_

3. What is the mean number of goals the players scored?

\_\_\_\_\_



Use the bar graph for Exercises 5–8.

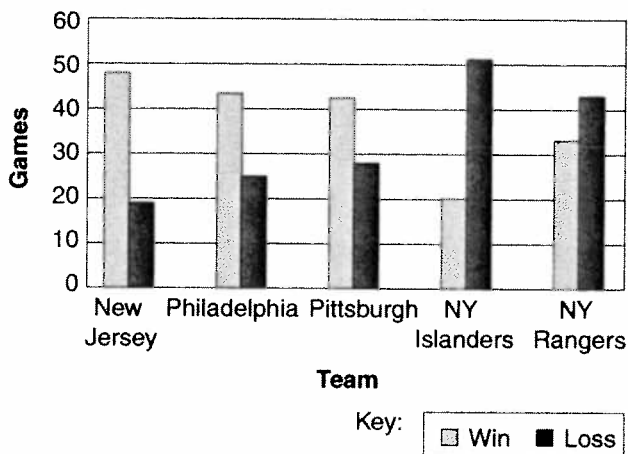
4. Which team won the most games that season? \_\_\_\_\_

5. Which team lost the most games that season? \_\_\_\_\_

6. What was the mean number of games won? \_\_\_\_\_

7. What was the mean number of games lost? \_\_\_\_\_

**NHL Eastern Conference Final Standings, 2000–2001**



**Circle the letter of the correct answer.**

8. Which hockey team had the greatest difference between the number of games won and lost?

- A** New Jersey  
**B** New York Islanders  
**C** Philadelphia  
**D** Pittsburgh

9. How do you know the mode of a data set by looking at a bar graph?

- F** The mode has two or more bars on the graph with the same height.  
**G** The mode has the tallest bar.  
**H** The mode has the lowest bar.  
**J** The bar for the mode is in the middle of the graph.

**LESSON**
**6-9**
**Problem Solving**
**Stem-and-Leaf Plots**

Use the Texas stem-and-leaf plots to answer each question.

**Dallas Normal Monthly Temperatures**

Stem	Leaves
4	3 7 8
5	6 7
6	6 7
7	3 7
8	1 5 5

Key: 4 | 3 = 43°F

**Houston Normal Monthly Temperatures**

Stem	Leaves
5	0 4 4
6	1 1 8
7	0 5 8
8	0 2 3

Key: 5 | 0 = 50°F

- Which city's temperature data has a mode of 85°F?  
\_\_\_\_\_
- Which city's temperature data has a range of 33°F?  
\_\_\_\_\_
- Which city has the lowest data value? What is that value?  
\_\_\_\_\_
- Which city has the highest data value? What is that value?  
\_\_\_\_\_
- Which city's temperature data has a mean of 68°F?  
\_\_\_\_\_
- Which city's temperature data has a median of 69°F?  
\_\_\_\_\_

**Circle the letter of the correct answer.**

- What do the data values 54°F and 61°F represent for the plots above?
  - the ranges of normal temperatures in Dallas and Houston
  - the mode normal temperatures for Houston
  - the mean and median normal temperatures for Dallas
  - the lowest normal temperatures for Dallas and Houston
- Which of the following would be the best way to display the Dallas and Houston temperature data?
  - on a line graph
  - in a tally table
  - on a bar graph
  - on a coordinate plane



**LESSON**  
**6-1 Practice B**  
**Make a Table**

**Complete each activity and answer each question.**

1. Pizza Express sells different-sized pizzas. The jumbo pizza has 20 slices. The extra large has 16 slices. The large has 12 slices. There are 8 slices in a medium, and 6 slices in a small. A personal-sized pizza has 4 slices. Use this data to complete the table at right, from largest to smallest pizza.


2. What pattern do you see in the table's data?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. A plain large pizza at Pizza Express costs \$13.75. A large pizza with one topping costs \$14.20. A 2-topping large pizza costs \$14.65, and a 3-topping large pizza costs \$15.10. If you want 4 toppings on your large pizza, it will cost you \$15.55. Use this data to complete the table at right.


4. What pattern do you see in the table's data?

\_\_\_\_\_

\_\_\_\_\_

5. How much does each slice of a 1-topping large pizza from Pizza Express cost? Round your answer to the nearest hundredth of a dollar.

\_\_\_\_\_

6. You and three friends buy two large pizzas from Pizza Express. One pizza has pepperoni and onions, and one pizza is plain. If you equally share the total price, how much will you each pay? How many slices will you each get?

\_\_\_\_\_

## LESSON

**6-5****Practice B****Frequency Tables and Histograms**

Mr. Allen said that his students could choose one day a week to not have homework assigned. He recorded their votes in the box below.

Monday	Friday	Thursday	Friday	Wednesday
Friday	Tuesday	Wednesday	Friday	Monday
Tuesday	Monday	Friday	Monday	Friday

1. Make a tally table to organize the data. Which day got the most votes?
2. Use your tally table from Exercise 1 to make a cumulative frequency table. How many students voted in all?

**Tally Table for Homework Votes**

<b>Mon</b>	
<b>Tues</b>	
<b>Wed</b>	
<b>Thurs</b>	
<b>Fri</b>	

**Number of Votes**

<b>Day</b>	<b>Frequency</b>	<b>Cumulative Frequency</b>
Mon		
Tues		
Wed		
Thurs		
Fri		

3. Use the data in the box below to make a frequency table with intervals.

<b>Class Social Studies Test Scores</b>									
78	95	81	83	75	68	100	73	92	85
59	70	88	92	99	87	75	67	89	84

<b>Class Social Studies Test Scores</b>					
<b>Scores</b>					
<b>Frequency</b>					

4. In which range of scores did most of the students' tests fall?

## LESSON

## 6-1

**Problem Solving*****Make a Table***

**Complete each activity and answer each question.**

1. In January, the normal temperature in Atlanta, Georgia, is  $41^{\circ}\text{F}$ . In February, the normal temperature in Atlanta is  $45^{\circ}\text{F}$ . In March, the normal temperature in Atlanta is  $54^{\circ}\text{F}$ , and in April, it is  $62^{\circ}\text{F}$ . Atlanta's normal temperature in May is  $69^{\circ}\text{F}$ . Use this data to complete the table at right.


2. In which month given does Atlanta have the highest temperature? the lowest?

\_\_\_\_\_

3. Use your table from Exercise 1 to find a pattern in the data and draw a conclusion about the temperature in June.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. In what other ways could you organize Atlanta's temperature data in a table?

\_\_\_\_\_

\_\_\_\_\_

**Circle the letter of the correct answer.**

5. Which of these statements about Atlanta's temperature data from January to May is true?
- A** It is always higher than  $40^{\circ}\text{F}$ .  
**B** It is always lower than  $60^{\circ}\text{F}$ .  
**C** It is hotter in March than in April.  
**D** It is cooler in February than in January.

6. Between which two months in Atlanta does the normal temperature change the most?
- F** January and February  
**G** February and March  
**H** March and April  
**J** April and May

# **LESSON** **6-5** **Problem Solving** **Frequency Tables and Histograms**

The sixth grade class voted on their favorite ice cream flavors.  
The results of the vote are shown below.

chocolate	vanilla	strawberry	vanilla	vanilla
vanilla	chocolate	vanilla	chocolate	strawberry
chocolate	strawberry	vanilla	vanilla	chocolate

1. Use the data to make a cumulative frequency table. How many students voted in all?

\_\_\_\_\_

2. Which flavor got the most votes?

\_\_\_\_\_

**Ice Cream Flavor Votes**

Flavor	Frequency	Cumulative Frequency

**Use the histogram for Exercises 3–5.**

3. How many years make up each age interval on the histogram?

\_\_\_\_\_

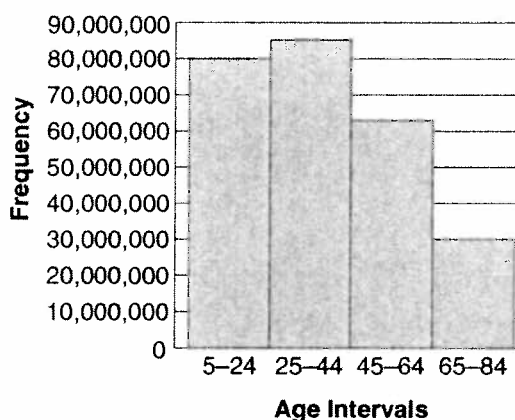
4. Which range of ages on the histogram has the highest population?

\_\_\_\_\_

5. Which range of ages has the lowest population?

\_\_\_\_\_

**U.S. Population (By Age)**



**Circle the letter of the correct answer.**

6. Which of the following cannot be used to make a cumulative frequency table?

- A** histogram  
**B** tally table  
**C** frequency table with intervals  
**D** double-bar graph

7. Which question can be answered by using the histogram above?

- A** How many people in the United States are younger than 5 years?  
**B** What is the mean age of all people in the United States?  
**C** How many people in the United States are older than 84 years old?  
**D** How many people in the United States are age 25 to 64?