

Prealgebra

Chapter 6 Review
















Objective [6.1a] Extract and interpret data from tables.

Brief Procedure	Example																									
<p>Examine the table carefully, using column headings, row labels, and data entries to extract the desired information.</p>	<p>The following table lists nutritional information for Fresh Stuffed Pitas at Wendy's.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 20%;">Pita</th> <th style="width: 15%;">Calories</th> <th style="width: 15%;">Fat</th> <th style="width: 15%;">Protein</th> <th style="width: 35%;">Sodium</th> </tr> </thead> <tbody> <tr> <td>Garden Veggie</td> <td>390</td> <td>15 g</td> <td>13 g</td> <td>780 mg</td> </tr> <tr> <td>Garden Ranch Chicken</td> <td>480</td> <td>17 g</td> <td>32 g</td> <td>1170 mg</td> </tr> <tr> <td>Chicken Caesar</td> <td>490</td> <td>17 g</td> <td>36 g</td> <td>1300 mg</td> </tr> <tr> <td>Classic Greek</td> <td>430</td> <td>19 g</td> <td>17 g</td> <td>1070 mg</td> </tr> </tbody> </table> <p>Which pita contains the most sodium?</p> <p>Look down the column headed "Sodium" until you find the largest number. That number is 1300 mg. Then look across that row to find the type of pita, Chicken Caesar.</p>	Pita	Calories	Fat	Protein	Sodium	Garden Veggie	390	15 g	13 g	780 mg	Garden Ranch Chicken	480	17 g	32 g	1170 mg	Chicken Caesar	490	17 g	36 g	1300 mg	Classic Greek	430	19 g	17 g	1070 mg
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	<p>Practice Exercise</p>																									
	<p>1. Use the table in the example above to determine which Fresh Stuffed Pita has the least fat.</p> <p>A. Garden Veggie B. Garden Ranch Chicken C. Chicken Caesar D. Classic Greek</p>																									

Objective [6.1b] Extract and interpret data from pictographs.

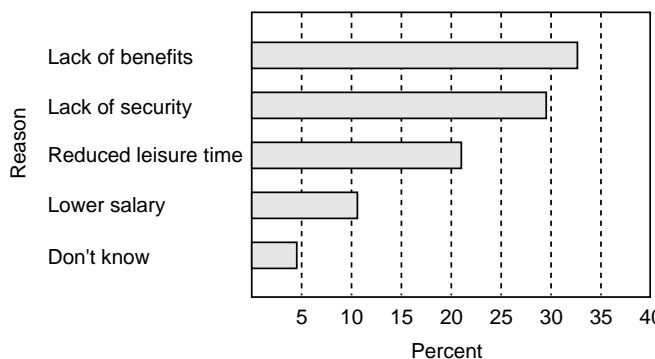
Brief Procedure	Example														
<p>Examine the pictograph carefully, noting the key that tells what each symbol represents and the number of symbols for each item.</p>	<p>The following pictograph represents the calories per tablespoon in various tablespreads.</p> <div data-bbox="688 354 1284 661" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #e0e0e0;">Tablespread</th> </tr> </thead> <tbody> <tr> <td style="background-color: #e0e0e0;">Jam</td> <td>☪ ☪ ☪ ☪ ☪ ☪</td> </tr> <tr> <td style="background-color: #e0e0e0;">Mayonnaise</td> <td>☪ ☪ ☪ ☪ ☪ ☪</td> </tr> <tr> <td style="background-color: #e0e0e0;">Peanut butter</td> <td>☪ ☪ ☪ ☪ ☪ ☪ ☪ ☪ ☪ ☪</td> </tr> <tr> <td style="background-color: #e0e0e0;">Honey</td> <td>☪ ☪ ☪ ☪ ☪ ☪</td> </tr> <tr> <td style="background-color: #e0e0e0;">Syrup</td> <td>☪ ☪ ☪ ☪ ☪ ☪</td> </tr> <tr> <td colspan="2" style="text-align: center;">☪ = 10 calories</td> </tr> </tbody> </table> </div> <p>a) Which tablespread contains the most calories per tablespoon? b) How many calories per tablespoon does syrup contain?</p> <p>a) Peanut butter has the largest number of symbols, so it contains the most calories per tablespoon. b) Syrup is represented by 6 symbols, each of which represents 10 calories. Thus, syrup contains $6 \cdot 10$, or 60 calories per tablespoon.</p>	Tablespread		Jam	☪ ☪ ☪ ☪ ☪ ☪	Mayonnaise	☪ ☪ ☪ ☪ ☪ ☪	Peanut butter	☪ ☪ ☪ ☪ ☪ ☪ ☪ ☪ ☪ ☪	Honey	☪ ☪ ☪ ☪ ☪ ☪	Syrup	☪ ☪ ☪ ☪ ☪ ☪	☪ = 10 calories	
Tablespread															
Jam	☪ ☪ ☪ ☪ ☪ ☪														
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Honey	☪ ☪ ☪ ☪ ☪ ☪														
Syrup	☪ ☪ ☪ ☪ ☪ ☪														
☪ = 10 calories															
	<p style="text-align: center;">Practice Exercise</p> <p>2. Use the pictograph in the example above to determine approximately how many more calories per tablespoon there are in peanut butter than in jam.</p> <p>A. 10 calories B. 20 calories C. 30 calories D. 40 calories</p>														

Objective [6.1c] Draw simple pictographs.

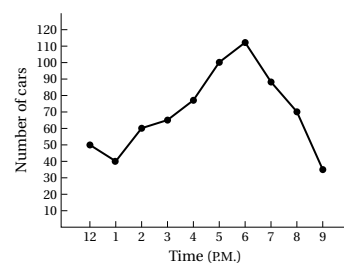
Brief Procedure	Example										
<p>Select a symbol and determine what it will represent. Then calculate how many symbols will be used for each item. List the items in a column, draw the appropriate number of symbols beside each, and give the pictograph a descriptive title.</p>	<p>International airline passenger arrivals in a recent year in four South American countries are listed below. Draw a pictograph to represent arrivals in these countries. Use a suitcase symbol to represent 1,000,000 arrivals.</p> <p>Argentina: 4,300,000 Brazil: 2,400,000 Chile: 1,500,000 Colombia: 1,300,000</p> <p>First we compute the number of symbols needed to represent the arrivals in each country.</p> <p>Argentina: $4,300,000 = 4.3 \times 1,000,000$, so we need 4 whole symbols and 0.3, or about $\frac{1}{3}$, of another symbol.</p> <p>Brazil: $2,400,000 = 2.4 \times 1,000,000$, so we need 2 whole symbols and 0.4, or about $\frac{1}{2}$, of another symbol.</p> <p>Chile: $1,500,000 = 1.5 \times 1,000,000$, so we need 1 whole symbol and 0.5, or $\frac{1}{2}$, of another symbol.</p> <p>Colombia: $1,300,000 = 1.3 \times 1,000,000$, so we need 1 whole symbol and 0.3, or about $\frac{1}{3}$, of another symbol.</p> <p>Now we can draw the pictograph. List the countries in a column, draw the appropriate number of symbols beside each, and title the pictograph "International Airline Passenger Arrivals."</p> <div style="text-align: center;"> <p>International Airline Passenger Arrivals</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td style="padding: 5px;">Argentina</td> <td style="text-align: center; padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Brazil</td> <td style="text-align: center; padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Chile</td> <td style="text-align: center; padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Colombia</td> <td style="text-align: center; padding: 5px;"></td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 5px;"> = 1,000,000 passengers</td> </tr> </tbody> </table> </div> <p>(continued)</p>	Argentina		Brazil		Chile		Colombia		 = 1,000,000 passengers	
Argentina											
Brazil											
Chile											
Colombia											
 = 1,000,000 passengers											

Objective [6.1c] continued													
	Practice Exercise												
	<p>3. The weekly audiences for various radio formats are listed below. Suppose you draw a pictograph to represent the data, using a radio symbol to represent 10,000,000 listeners. How many symbols would you use to represent the Top 40 audience?</p> <p style="margin-left: 40px;">Country: 43,300,000 News/talk: 38,900,000 Adult contemporary: 38,800,000 Top 40: 22,800,000 Oldies: 22,300,000</p> <p>A. About $2\frac{1}{3}$ B. About 4 C. About $10\frac{1}{3}$ D. About 23</p>												
Objective [6.2a] Extract and interpret data from bar graphs.													
Brief Procedure	Example												
Examine the bar graph carefully, noting the items listed, the scale used, and the lengths of the bars.	<p>The following bar graph shows the number of calories burned per hour by a 152 lb person during various activities.</p> <div style="text-align: center;"> <table border="1" style="margin: 10px auto;"> <caption>Data from Bar Graph</caption> <thead> <tr> <th>Activity</th> <th>Calories burned per hour</th> </tr> </thead> <tbody> <tr> <td>Tennis</td> <td>420</td> </tr> <tr> <td>Jogging</td> <td>650</td> </tr> <tr> <td>Hiking</td> <td>580</td> </tr> <tr> <td>Office work</td> <td>180</td> </tr> <tr> <td>Sleeping</td> <td>80</td> </tr> </tbody> </table> </div> <p>a) Which activity burns the fewest calories per hour? b) About how many calories are burned per hour by jogging?</p> <p>a) The shortest bar is for sleeping. Thus, sleeping burns the fewest calories. b) Move to the right end of the bar representing jogging and then go down to the horizontal scale. We read that jogging burns about 650 calories per hour.</p>	Activity	Calories burned per hour	Tennis	420	Jogging	650	Hiking	580	Office work	180	Sleeping	80
	Activity	Calories burned per hour											
Tennis	420												
Jogging	650												
Hiking	580												
Office work	180												
Sleeping	80												
	Practice Exercise												
	<p>4. Use the bar graph in the example above to determine which activity burns about 420 calories per hour.</p> <p>A. Tennis B. Hiking C. Office work D. Sleeping</p>												

Objective [6.2b] Draw bar graphs.

Brief Procedure	Example												
<p>Determine whether a horizontal or a vertical bar graph will be drawn. Label the appropriate scales, draw bars corresponding to the data, and give the graph an appropriate title.</p>	<p>Listed below are the reasons adult workers give for not going into business for themselves. Make a horizontal bar graph of the data.</p> <p>Lack of benefits: 34% Lack of security: 29% Reduced leisure time: 22% Lower salary: 11% Don't know: 4%</p> <p>First, on the vertical scale label the reasons given in five equally spaced intervals, and title that scale "Reason." Then mark and label the horizontal scale by 5's, and title this scale "Percent." Draw a horizontal bar for each reason to show the corresponding percent. Finally, give the graph an appropriate title, such as "Barriers to Being Own Boss."</p> <div style="text-align: center;"> <p>Barriers to Being Own Boss</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Barriers to Being Own Boss</caption> <thead> <tr> <th>Reason</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Lack of benefits</td> <td>34%</td> </tr> <tr> <td>Lack of security</td> <td>29%</td> </tr> <tr> <td>Reduced leisure time</td> <td>22%</td> </tr> <tr> <td>Lower salary</td> <td>11%</td> </tr> <tr> <td>Don't know</td> <td>4%</td> </tr> </tbody> </table> </div>	Reason	Percent	Lack of benefits	34%	Lack of security	29%	Reduced leisure time	22%	Lower salary	11%	Don't know	4%
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	<p style="text-align: center;">Practice Exercise</p> <p>5. The number of units of a popular software product sold in four recent years are listed below.</p> <p>1995: 30 million 1996: 63 million 1997: 84 million 1998: 110 million</p> <p>Suppose you draw a vertical bar graph of the data. Which label would be appropriate for the vertical scale?</p> <p>A. Type of software B. Price C. Year D. Units sold (in millions)</p>												

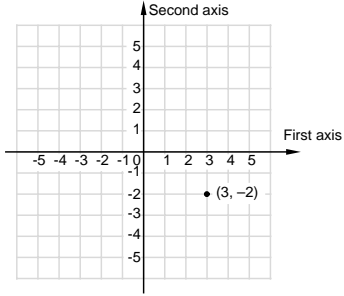
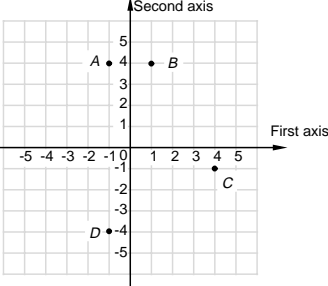
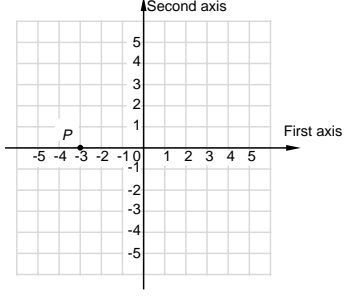
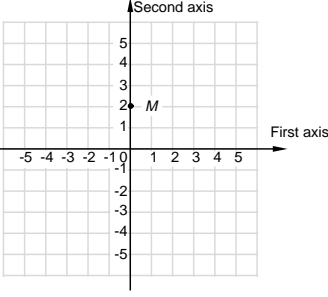
Objective [6.2c] Extract and interpret data from line graphs.

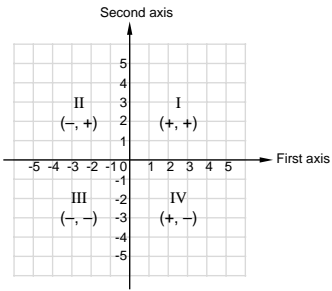
Brief Procedure	Example																						
<p>Examine the graph carefully, noting the items on the horizontal and vertical scales, the marks on the scales, and the points on the graph.</p>	<p>The following line graph shows the number of cars passing through an intersection during various hours of the day.</p>  <table border="1" data-bbox="812 357 1153 630"><caption>Data from the line graph</caption><thead><tr><th>Time (P.M.)</th><th>Number of cars</th></tr></thead><tbody><tr><td>12</td><td>50</td></tr><tr><td>1</td><td>40</td></tr><tr><td>2</td><td>60</td></tr><tr><td>3</td><td>65</td></tr><tr><td>4</td><td>75</td></tr><tr><td>5</td><td>100</td></tr><tr><td>6</td><td>115</td></tr><tr><td>7</td><td>90</td></tr><tr><td>8</td><td>70</td></tr><tr><td>9</td><td>40</td></tr></tbody></table> <p>a) During which hour was traffic the heaviest? b) During which hour did about 70 cars pass through the intersection?</p> <p>a) Find the highest point on the graph and then go down to the horizontal scale to read the corresponding hour. We see that traffic was heaviest during the 6 P.M. hour. b) We locate 70 on the vertical scale and go to the right until we come to a point (a dot) on the graph. Then go down to the horizontal scale to read the corresponding hour. We see that about 70 cars passed through the intersection during the 8 P.M. hour.</p>	Time (P.M.)	Number of cars	12	50	1	40	2	60	3	65	4	75	5	100	6	115	7	90	8	70	9	40
	Time (P.M.)	Number of cars																					
	12	50																					
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2	60																						
3	65																						
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5	100																						
6	115																						
7	90																						
8	70																						
9	40																						
<p>Practice Exercise</p>																							
<p>6. Use the line graph in the example above to determine whether the traffic decreased, stayed the same, or increased between 3 P.M. and 4 P.M.</p> <p>A. Decreased B. Stayed the same C. Increased</p>																							

Objective [6.2d] Draw simple line graphs.

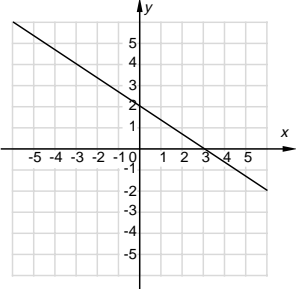
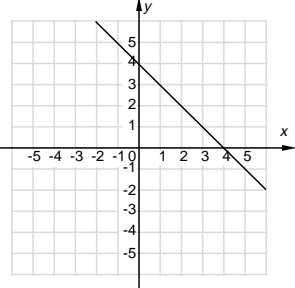
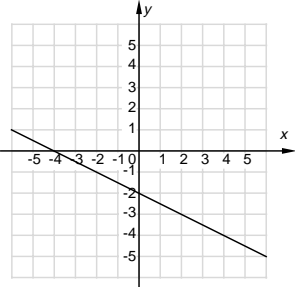
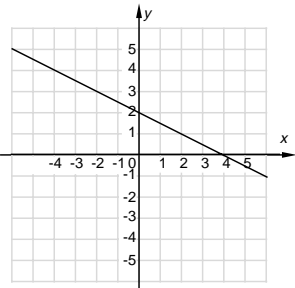
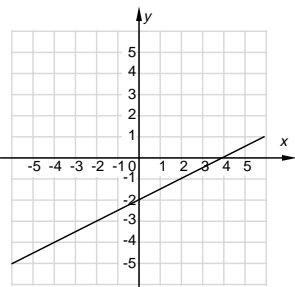
Brief Procedure	Example										
<p>Mark, label, and title the scales. Draw points representing the data, connect them with line segments, and give the graph an appropriate title.</p>	<p>Listed below is the total revenue for the Uptown Boutique for several years. Make a line graph of the data.</p> <p>1995: \$95,000 1996: \$120,000 1997: \$100,000 1998: \$125,000</p> <p>Indicate the years on the horizontal scale and label it “Year.” We will scale the vertical axis in thousands. Mark the vertical scale by 10’s starting with \$90. Use a jagged line to indicate the missing numbers. Label the vertical scale “Total Revenue (in thousands).” Draw points representing the data and connect them with line segments. Finally, give the graph an appropriate title, such as “Uptown Boutique.”</p> <div data-bbox="735 709 1234 1140" data-label="Figure"> <table border="1"> <caption>Uptown Boutique Revenue Data</caption> <thead> <tr> <th>Year</th> <th>Total Revenue (in thousands)</th> </tr> </thead> <tbody> <tr> <td>1995</td> <td>95</td> </tr> <tr> <td>1996</td> <td>120</td> </tr> <tr> <td>1997</td> <td>100</td> </tr> <tr> <td>1998</td> <td>125</td> </tr> </tbody> </table> </div>	Year	Total Revenue (in thousands)	1995	95	1996	120	1997	100	1998	125
Year	Total Revenue (in thousands)										
1995	95										
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	<p style="text-align: center;">Practice Exercise</p> <p>7. Caryn’s scores on five math tests are listed below.</p> <p>Test 1: 83% Test 2: 91% Test 3: 74% Test 4: 79% Test 5: 86%</p> <p>Suppose you draw a line graph of the data. Which label would be appropriate for the horizontal scale?</p> <p>A. Caryn B. Test C. Math D. Score</p>										

Objective [6.3a] Plot a point given its coordinates. Find coordinates given a point.

Brief Procedure	Example	Practice Exercises
<p>Given a point with coordinates (a, b), start at the origin and move a units right or left depending on whether a is positive or negative. Then move b units up or down depending on whether b is positive or negative. Make a dot and label the point.</p>	<p>Plot the point $(3, -2)$.</p> <p>The first coordinate is positive so, starting at the origin, move 3 units to the right. The second coordinate is negative, so we then move down 2 units.</p> 	<p>8. Which point is $(-1, 4)$?</p>  <p>A. <i>A</i> B. <i>B</i> C. <i>C</i> D. <i>D</i></p>
<p>Given a point, find its coordinates by determining how far the point is to the right or left of the origin and then how far up or down.</p>	<p>Find the coordinates of point P.</p>  <p>Point P is 3 units to the left of the origin and 0 units up or down. Its coordinates are $(-3, 0)$.</p>	<p>9. Find the coordinates of point M.</p>  <p>A. $(0, -2)$ B. $(0, 2)$ C. $(2, 0)$ D. $(2, 2)$</p>

Objective [6.3b] Determine the quadrant in which a point lies.		
Brief Procedure	Example	Practice Exercise
<p>The following figure shows the signs of coordinates of points in each quadrant.</p> 	<p>In which quadrant is the point $(-3, -5)$ located?</p> <p>Both coordinates are negative, so $(-3, -5)$ is in quadrant III.</p>	<p>10. In which quadrant is the point $(2, -1)$ located?</p> <p>A. I B. II C. III D. IV</p>
Objective [6.3c] Determine whether an ordered pair is a solution of an equation with two variables.		
Brief Procedure	Example	Practice Exercise
<p>Substitute coordinates of the ordered pair for the variables, using the first number to replace the variable that occurs first alphabetically. If a true equation results, the pair is a solution.</p>	<p>Determine whether $(-2, 2)$ is a solution of $2b - a = 6$.</p> <p>We substitute -2 for a and 2 for b.</p> $\begin{array}{r} 2b - a = 6 \\ \hline 2 \cdot 2 - (-2) \stackrel{?}{=} 6 \\ 4 + 2 \quad \\ 6 \quad \quad \text{TRUE} \end{array}$ <p>Since $6 = 6$ is true, $(-2, 2)$ is a solution of the equation.</p>	<p>11. Determine whether $(-4, 1)$ is a solution of $n - m = -5$.</p> <p>A. Yes B. No</p>
Objective [6.4a] Find solutions of equations in two variables.		
Brief Procedure	Example	Practice Exercise
<p>Replace one variable with some number and then solve the resulting equation for the remaining variable.</p>	<p>Find an ordered pair that is a solution of $3x + y = 7$; let $x = 2$.</p> <p>We substitute 2 for x and then solve for y.</p> $\begin{aligned} 3x + y &= 7 \\ 3 \cdot 2 + y &= 7 \\ 6 + y &= 7 \\ 6 + y - 6 &= 7 - 6 \\ y &= 1 \end{aligned}$ <p>The ordered pair $(2, 1)$ is a solution of $3x + y = 7$.</p>	<p>12. Find an ordered pair that is a solution of $x - y = 5$; let $y = -2$.</p> <p>A. $(-7, -2)$ B. $(-3, -2)$ C. $(3, -2)$ D. $(7, -2)$</p>

Objective [6.4b] Graph linear equations in two variables.

Brief Procedure	Example	Practice Exercise								
<p>1. Select a value for one variable and calculate the corresponding value of the other variable. Form an ordered pair using alphabetical order as indicated by the variables.</p> <p>2. Repeat step (1) to obtain at least two other ordered pairs. Two points are essential to determine a straight line. A third point serves as a check.</p> <p>3. Plot the ordered pairs and draw a straight line passing through the points.</p> <p>If the equation is given in the form $Ax + By = C$, it is often convenient to solve for y before using the procedure above.</p>	<p>Graph $2x + 3y = 6$.</p> <p>First we solve for y to find an equivalent equation in the form $y = mx + b$.</p> $2x + 3y = 6$ $3y = -2x + 6$ $\frac{1}{3} \cdot 3y = \frac{1}{3}(-2x + 6)$ $y = -\frac{2}{3}x + 2$ <p>We find two other pairs that are solutions, using multiples of 3 to avoid fractions. We then complete and label the graph.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>2</td> </tr> <tr> <td>-3</td> <td>4</td> </tr> <tr> <td>3</td> <td>0</td> </tr> </tbody> </table> 	x	y	0	2	-3	4	3	0	<p>13. Graph $x - 2y = 4$.</p> <p>A.</p>  <p>B.</p>  <p>C.</p>  <p>D.</p> 
x	y									
0	2									
-3	4									
3	0									

Objective [6.5a] Find the mean of a set of numbers and solve applied problems involving means.		
Brief Procedure	Example	Practice Exercise
Add the numbers and then divide by the number of items of data.	<p>A student's scores on four tests were 80, 64, 91, and 85. What was the average score?</p> $\frac{80 + 64 + 91 + 85}{4} = \frac{320}{4} = 80$ <p>The average score was 80.</p>	<p>14. On 5 successive days, Morgan ran 4 mi, 2 mi, 10 mi, 3 mi, and 6 mi. What was the average number of miles per day?</p> <p>A. 4.5 mi B. 5 mi C. 6.25 mi D. 7 mi</p>
Objective [6.5b] Find the median of a set of numbers and solve applied problems involving medians.		
Brief Procedure	Example	Practice Exercise
List the data in order from smallest to largest. The median is the middle number if there is an odd number of data items. If there is an even number of data items, the median is the average of the two middle numbers.	<p>Find the median of each set of hourly wages.</p> <p>a) \$6.50, \$5.75, \$7.25, \$8.00, \$7.40 b) \$20, \$15, \$10, \$12</p> <p>a) List the data in order from smallest to largest: \$5.75, \$6.50, \$7.25, \$7.40, \$8.00</p> <p>There is an odd number of data items. The middle number is \$7.25, so the median wage is \$7.25.</p> <p>b) List the data in order from smallest to largest. \$10, \$12, \$15, \$20</p> <p>There is an even number of items. The median is the average of the two middle numbers:</p> $\text{Median} = \frac{\$12 + \$15}{2} = \frac{\$27}{2} = \13.50	<p>15. Find the median of the following temperatures: 56°, 48°, 61°, 66°, 53°</p> <p>A. 53° B. 56° C. 58.5° D. 61°</p>

Objective [6.5c] Find the mode of a set of numbers and solve applied problems involving modes.

Brief Procedure	Example	Practice Exercise
<p>The mode of a set of data is the number or numbers that occur most often. If each number occurs the same number of times, there is no mode.</p>	<p>Find the modes of each set of data.</p> <p>a) 16, 23, 27, 27, 27 b) \$34, \$34, \$51, \$58, \$58, \$64 c) 7, 9, 15, 21, 45</p> <p>a) The number that occurs most often is 27. Thus the mode is 27.</p> <p>b) The two numbers \$34 and \$58 occur most often. Thus the modes are \$34 and \$58.</p> <p>c) No number occurs more often than any other. Thus there is no mode.</p>	<p>16. Find the mode of these data: \$17, \$28, \$33, \$41, \$56, \$56, \$91</p> <p>A. \$41 B. \$46 C. \$56 D. There is no mode.</p>

Objective [6.6a] Make predictions from a set of data using interpolation or extrapolation.

Brief Procedure

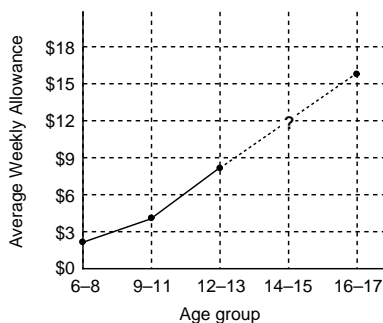
Interpolation can be used to find a value between two known values. To use interpolation to make a prediction, we can graph the given data and read the predicted value from the graph. We can also find the average of the known values on either side of the missing value.

Example

The following table gives the average weekly allowance for children in various age groups. Use interpolation to estimate the average weekly allowance for children in the 14-15 age group.

Age Group	Allowance
6-8	\$2.79
9-11	\$4.08
12-13	\$8.16
14-15	?
16-17	\$15.70

First we graph the data.



From the graph we estimate that the average weekly allowance for children in the 14-15 age group is about \$12.

We can also estimate this value by finding the average of the data values \$8.16 and \$15.70:

$$\frac{\$8.16 + \$15.70}{2} = \$11.93$$

Practice Exercise

17. The following table gives the times several math students spent studying for a test and their test scores. Estimate the missing data value.

Study time (in hours)	Test score (in percent)
4	76
6	79
7	80
8	85
10	?
12	91

- A. 86
- B. 88
- C. 90
- D. 92

Objective [6.6a] continued

Brief Procedure

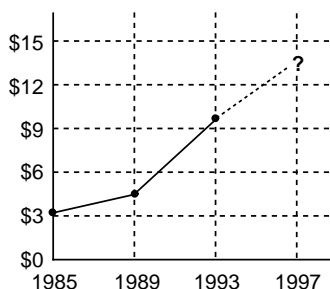
Extrapolation can be used to find a value that goes beyond the given data. To use extrapolation to make a prediction, we graph the data, extend the graph, and read the predicted value from the extended graph.

Example

The following table gives the average weekly allowance of children 12 years old and younger in various years. Use extrapolation to estimate the income in 1997.

Year	Income
1985	\$3.03
1989	\$4.42
1993	\$9.56
1997	?

We graph the given data and then draw a “representative” line beyond the data.



From the graph we estimate that the value for 1997 is about \$13.50. Answers will vary depending on the placement of the “representative” line.

Practice Exercise

18. The following table gives the prices of 2" x 4" lumber of various lengths. Use extrapolation to estimate the price of an 18-ft piece of 2" x 4" lumber.

Length	Price
8 ft	\$1.99
10 ft	\$2.99
12 ft	\$3.78
14 ft	\$4.57
16 ft	\$5.98
18 ft	?

- A. About \$6
- B. About \$7
- C. About \$10
- D. About \$12

Objective [6.6b] Calculate the probability of an event occurring.

Brief Procedure	Example	Practice Exercise
<p>If an event E can occur m ways out of n possible equally likely outcomes, then the probability of E occurring = $\frac{m}{n}$.</p>	<p>Suppose a bag contains 12 equally sized marbles: 3 are blue, 5 are green, and 4 are yellow. A marble is drawn from the bag at random. Find the probability that a green marble is selected.</p> <p>There are 5 ways to select a green marble and $3 + 5 + 4$, or 12, ways to select any marble, so the probability of selecting a green marble is $\frac{5}{12}$.</p>	<p>19. Suppose a die is about to be rolled. Find the probability that an even number will be rolled.</p> <p>A. $\frac{1}{6}$</p> <p>B. $\frac{1}{3}$</p> <p>C. $\frac{1}{2}$</p> <p>D. 1</p>