# ANSWERS FOR 7.4

For use with pages 333–335

### 7.4 Practice and Problem Solving

**12.** 127% **14.** 3.9%

**16.** 1.25% **18.** 310%

**20.** 4730% **22.** 0.8%

**24.** $55\frac{5}{9}\%$ **26.** 0.28%

**28.** 0.4; $\frac{2}{5}$ **30.** 0.325; $\frac{13}{40}$

**32.** 0.01; $\frac{1}{100}$

**34.** 2.002; $2\frac{1}{500}$

**36.** 1.8709; $1\frac{8709}{10{,}000}$

**38.** 0.0078; $\frac{39}{5000}$

**40.** 0.022, 22%, $\frac{28}{125}$, $\frac{9}{40}$, 0.228

**42.** 0.58%, 0.058, $\frac{4}{7}$, 58%, 58

**44.** It is greater than 100%.

**46.** 5% **48.** 31%

**50.** $450\% = \frac{9}{2}$

**52.** $0.0825 < \frac{17}{200}$

**54.** $101\% > 0.101$

**56.** about 5.7%

**58.** The total of the percents is not 100%; a bar graph would be an appropriate way to display the data.

### 7.4 Mixed Review

**60.** $\frac{x}{6} - 8 > -7$; $x > 6$

**62.** 123.28 **64.** 2.2

### 7.4 Test-Taking Practice

**66.** B

# ANSWERS FOR 7.1

For use with pages 319–320

### 7.1 Practice and Problem Solving

**10.** $\frac{3}{2}$, 3 to 2, 3 : 2

**12.** $-\frac{4}{3}$, $-4$ to 3, $-4$ : 3

**14.** $\frac{3}{1}$, 3 to 1, 3 : 1

**16.** $\frac{9}{14}$, 9 to 14, 9 : 14

**18.** $\frac{60 \text{ miles}}{\text{hour}} = \frac{1 \text{ mile}}{\text{minute}}$

**20.** $\frac{105 \text{ min}}{\text{game}} = \frac{1.75 \text{ h}}{\text{game}}$

**22.** Write the ratio of its length to its width, and simplify.

**24.** $\frac{-4.25 \text{ m}}{1 \text{ sec}}$ **26.** $\frac{122 \text{ rotations}}{1 \text{ min}}$

**28.** $\frac{6}{8} = \frac{3}{4}$

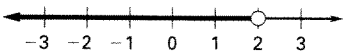
**30.** 10 **32.** 3

**34.** 66 ft/sec, 25 ft/sec, 99 ft/sec; cheetah; roadrunner

**36.** The 1-pound box. *Sample Answer:* The 10-ounce box costs \$.269 per ounce and the 1-pound box costs \$.205 per ounce, so the 1-pound box costs less per ounce.

### 7.1 Mixed Review

**38.** $y < 2$




**40.** $-9$ **42.** 80

### 7.1 Test-Taking Practice

**44.** Megan; Emily runs about 4.8 meters per second and Megan runs 5 meters per second, and $4.8 < 5$.

# ANSWERS FOR 7.2

For use with pages 324–326

### 7.2 Practice and Problem Solving

**8.** yes **10.** no

**12.** 12 **14.** 3

**16.** 13.2 **18.** 138

**20.** 5 in. **22.** 15.8 in.

**24.** *Sample Answer:* Because $5 = 10 \div 2$, divide 16 by 2 to find $x$; $x = 16 \div 2 = 8$.

**26.** 1.25 million

**28.** About 36 flowers; divide 2 million flowers by 55,000 miles to find the number of flowers visited per mile.

**30.** 8

**32.** $x = 9$, $y = 7$

**34.** $n = 112$, $p = 13.125$

### 7.2 Mixed Review

**36.** $9x - 4 \leq 95$; $x \leq 11$

**38.** $\frac{43 \text{ mi}}{1 \text{ h}}$

### 7.2 Test-Taking Practice

**40.** C

# ANSWERS FOR 7.3

For use with pages 329–330

### 7.3 Practice and Problem Solving

**8.** 78% **10.** 15%

**12.** 36 **14.** 62.7

**16.** 46 **18.** 450

**20.** 45 lb **22.** 3%

**24.** 2.43 **26.** 790,000

**28.** Because you are multiplying 400 by 0.1, move the decimal point in 400 one place to the left.

**30.** $5y$ **32.** 2.5%

**34.** 81.8%

### 7.3 Mixed Review

**36.** $8\frac{357}{500}$ **38.** 0.19435

**40.** 1.4

### 7.3 Test-Taking Practice

**42.** $\frac{560}{875} = \frac{p}{100}$; $p = 64\%$

## ANSWERS FOR 7.7

For use with pages 349–350

### 7.7 Practice and Problem Solving

**8.** 27 **10.** 0.6

**12.** 20 **14.** 325

**16.** 34% **18.** $82.25

**20.** The same. *Sample Answer:* Because $\frac{3}{100} = 3\%$, you can rewrite the original equation as $\frac{12}{b} = 3\%$. Cross multiplying then gives $12 = 3\% \cdot b$.

**22.** 30% of 120 = 120% of 30

**24.** $625 **26.** 15.72%

### 7.7 Mixed Review

**28.** $1\frac{3}{4}$ **30.** $1\frac{4}{7}$

**32.** $2\frac{8}{9}$ **34.** 21.875

### 7.7 Test-Taking Practice

**36.** $0.375x = 6$; 16 theaters

## ANSWERS FOR 7.5

For use with pages 340–341

### 7.5 Practice and Problem Solving

**8.** decrease; $2.\overline{2}\%$

**10.** increase; 14%

**12.** increase; 20%

**14.** 21,489

**16.** 45.5

**18.** 30,776.976

**20.** 300% increase

**22.** 62.5% decrease

**24.** True; the increase is 2, and $\frac{2}{1} = 2$, or 200%.

**26.** False; multiplying by $\frac{1}{4}$ gives a 75% decrease.

**28.** 824,999,900%

**30.** 25% decrease



### 7.5 Mixed Review

**32.** 1.58832

**34.** −2.6

**36.** 8

**38.** 9

**40.** 32

## ANSWERS FOR 7.6

For use with pages 344–346

### 7.6 Practice and Problem Solving

**8.** $29.40 **10.** $37.93

**12.** $43.80 **14.** $76.32

**16.** $31.61 **18.** $21

**20.** discount; 25%

**22.** markup; 75%

**24.** markup; 80%

**26.** $3.63, $4.84. *Sample Answer:* The wider range allows them to avoid leaving coins.

**28.** 35%

**30.** *Sample Answer:* You can round $42 down to $40. Because $25\% = \frac{1}{4}$, find $\frac{1}{4}$ of 40, which is 10. Then subtract 10 from 40 to find the estimated sale price, about $30.

**32.** $22.92

### 7.6 Mixed Review

**34.** 7 **36.** 70%

**38.** 6 **40.** 24

### 7.6 Test-Taking Practice

**42.** I

# ANSWERS FOR 7.8

For use with pages 356–357

### 7.8 Practice and Problem Solving

**4.** $\frac{1}{3}$ **6.** $\frac{11}{30}$

**8.** 0 **10.** 20%

**12.** 48% **14.** 1

**16.** 40 **18.** 0

**20.** $\frac{5}{6}$ **22.** $\frac{1}{8}$

**24.** Sharon. *Sample Answer:* Sharon got a hit 35% of her times at bat, while Erica got a hit only about 29% of her times at bat.

**26.** *Sample Answer:* The coins are different sizes, so it is easy to tell which coin you are choosing by its feel. Also, even if you try to choose the first coin you touch, it is more likely to be a larger coin.

### 7.8 Mixed Review

**28.** $51.56 **30.** 2

**32.** −88

### 7.8 Test-Taking Practice

**34.** I

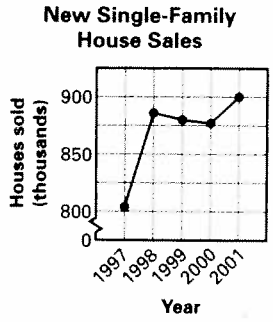


# ANSWERS FOR 12.3

For use with pages 607–609

### 12.3 Practice and Problem Solving

**10.**



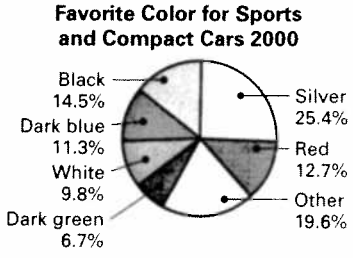

*Sample Answer:* There is an overall increase in the number of houses sold over time, though there was a slight decrease during the period from 1998 to 2000.

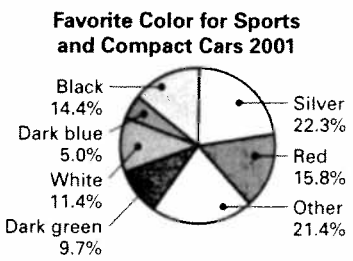
**12.** The Bronx: 14%, Queens: 36%, Brooklyn: 24%, Staten Island: 18%, Manhattan: 8%

**14.** *Sample Answer:* Queens is the largest borough, followed in order by Brooklyn, Staten Island, The Bronx, and Manhattan.

**16.** Bar graph; the data is collected at distant locations.

**18.**






# ANSWERS FOR 12.3 (CONT.)

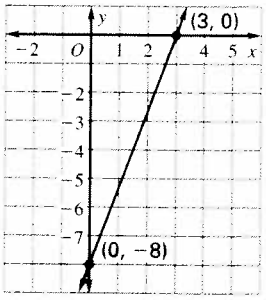
For use with pages 607–609

**20.** *Sample Answer:* By comparing the graphs; it is easier to see which categories increased and decreased the most from the graph.

**22.** *Sample Answer:* Temperatures collected at the same time every day for a month could be shown in a stem-and-leaf plot, a box-and-whisker plot, or a histogram. For the stem-and-leaf plot, just order the data and group it into the plot. For the box-and-whisker plot, find the extremes, the upper quartile, the median, and the lower quartile, and draw the plot. For the histogram, count the number of temperatures in each of several adjoining intervals and draw the graph.

### 12.3 Mixed Review

**24.**




**26.**

| | | |
|---|---|---|
| 1 | 0 1 5 6 7 8 |
| 2 | 0 1 4 6 8 9 |
| 3 | 1 4 6 7 9 |

Key: 3 | 1 = 31

### 12.3 Test-Taking Practice

**28.** Circle graph or bar graph. *Sample Answer:* A circle graph shows what part of the whole each answer represents and a bar graph displays the three answers as distinct categories, so either is appropriate.

## ANSWERS FOR 12.4

For use with pages 620–622

### 12.4 Practice and Problem Solving

**8.** 8 choices

**10.** 15 choices

**12.** 30 ways

**14.** *Sample Answer:* Draw a tree diagram to list and then count all of the possibilities or use the counting principle.

**16.** $\frac{1}{625}$ **18.** 27 bottles

**20.** $\frac{2}{3}$. *Sample Answer:* There are 6 possible outcomes, 2 of which are all boys or all girls, so $6 - 2 = 4$ include at least one boy and one girl.

**22.** 64 symbols; 1 symbol; 1 symbol

### 12.4 Mixed Review

**24.** 0 **26.** $-\frac{3}{4}$

### 12.4 Test-Taking Practice

**28.** B

## ANSWERS FOR 12.8

For use with pages 641–643

### 12.8 Practice and Problem Solving

**4.** 0.24 **6.** 0.2

**8.** 0.4

**10.** independent; $\frac{1}{20}$

**12.** dependent; $\frac{1}{19}$

**14.** $\frac{1}{128}$; $\frac{1}{2}$ **16.** $\frac{9}{16}$

### 12.8 Mixed Review

**18.** 35 **20.** 28

### 12.8 Test-Taking Practice

**22.** C