Name Date Time

STUDY LINK 9•1

Fractions, Decimals, and Percents

SRB 61 62

Rename each decimal as a fraction and a percent.

1. $0.90 = \frac{\square}{100} = \_\_\_\_\%$ **2.** $0.53 = \frac{\square}{100} = \_\_\_\_\%$ **3.** $0.04 = \frac{\square}{100} = \_\_\_\_\%$

Rename each percent as a fraction and a decimal.

4. $60\% = \frac{\square}{100} = \_\_.\_\_$ **5.** $25\% = \frac{\square}{100} = \_\_.\_\_$ **6.** $7\% = \frac{\square}{100} = \_\_.\_\_$

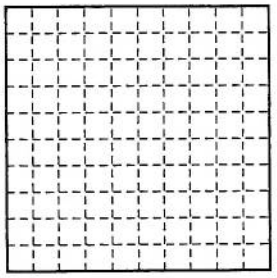
Rename each fraction as a decimal and a percent.

7. $\frac{50}{100} = \_\_.\_\_ = \_\_\_\_\%$ **8.** $\frac{75}{100} = \_\_.\_\_ = \_\_\_\_\%$ **9.** $\frac{6}{100} = \_\_.\_\_ = \_\_\_\_\%$

10. Shade more than $\frac{10}{100}$ and less than $\frac{30}{100}$ of the grid.
Write the value of the shaded part as a decimal and a percent.

Decimal: _____

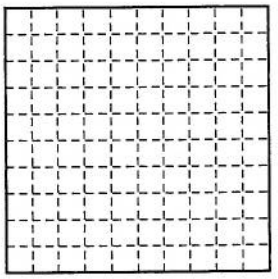
Percent: _____



11. Shade more than 25% and less than 60% of the grid.
Write the value of the shaded part as a decimal and a percent.

Decimal: _____

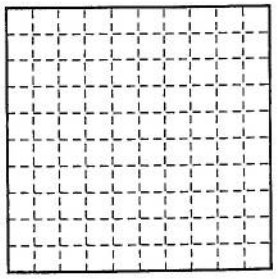
Percent: _____



12. Shade more than 0.65 and less than 0.85 of the grid.
Write the value of the shaded part as a decimal and a percent.

Decimal: _____

Percent: _____



Practice

Order the fractions from smallest to largest.

13. $\frac{3}{6}, \frac{3}{3}, \frac{3}{5}, \frac{3}{7}$ _____

14. $\frac{2}{3}, \frac{6}{7}, \frac{1}{2}, \frac{19}{20}$ _____

Name Date Time

STUDY LINK 9•1

Trivia Survey

Conduct the survey below. The results will be used in Lesson 9-6.

SRB 70

Find at least five people to answer the following survey questions. You can ask family members, relatives, neighbors, and friends.

BE CAREFUL! You will not ask every person every question. Pay attention to the instructions that go with each question.

Record each answer with a tally mark in the Yes or No column.

Question	Yes	No
1. Is Monday your favorite day? (Ask everyone younger than 20.)		
2. Have you gone to the movies in the last month? (Ask everyone older than 8.)		
3. Did you eat breakfast today? (Ask everyone over 25.)		
4. Do you keep a map in your car? (Ask everyone who owns a car.)		
5. Did you eat at a fast-food restaurant yesterday? (Ask everyone.)		
6. Did you read a book during the last month? (Ask everyone over 20.)		
7. Are you more than 1 meter tall? (Ask everyone over 20.)		
8. Do you like liver? (Ask everyone.)		

Name _____ Date _____ Time _____

STUDY LINK 9·2

Coins as Percents of $1

1. How many pennies in $1? _____ What fraction of $1 is 1 penny? _____

Write the decimal that shows what part of $1 is 1 penny. _____

What percent of $1 is 1 penny? _____%

2. How many nickels in $1? _____ What fraction of $1 is 1 nickel? _____

Write the decimal that shows what part of $1 is 1 nickel. _____

What percent of $1 is 1 nickel? _____%

3. How many dimes in $1? _____ What fraction of $1 is 1 dime? _____

Write the decimal that shows what part of $1 is 1 dime. _____

What percent of $1 is 1 dime? _____%

4. How many quarters in $1? _____ What fraction of $1 is 1 quarter? _____

Write the decimal that shows what part of $1 is 1 quarter. _____

What percent of $1 is 1 quarter? _____%

5. How many half-dollars in $1? _____ What fraction of $1 is 1 half-dollar? _____

Write the decimal that shows what part of $1 is 1 half-dollar. _____

What percent of $1 is 1 half-dollar? _____%

6. Three quarters (75¢) is $\frac{3}{4}$ of $1.

Write the decimal. _____

What percent of $1 is

3 quarters? _____%

7. Two dimes (20¢) is $\frac{2}{10}$ of $1.

Write the decimal. _____

What percent of $1 is

2 dimes? _____%

Practice

8. _____ = 748 * 6 **9.** 51 * 90 = _____ **10.** _____ = 28 * 903

Name _____ Date _____ Time _____

STUDY LINK 9•3

Calculator Decimals

1. Use your calculator to rename each fraction below as a decimal.

$\frac{1}{2}$	0.5
$\frac{1}{3}$	0.333333
$\frac{1}{4}$	
$\frac{1}{5}$	
$\frac{1}{6}$	
$\frac{1}{7}$	
$\frac{1}{8}$	
$\frac{1}{9}$	
$\frac{1}{10}$	
$\frac{1}{11}$	
$\frac{1}{12}$	
$\frac{1}{13}$	

$\frac{1}{14}$	
$\frac{1}{15}$	
$\frac{1}{16}$	
$\frac{1}{17}$	
$\frac{1}{18}$	
$\frac{1}{19}$	
$\frac{1}{20}$	
$\frac{1}{21}$	
$\frac{1}{22}$	
$\frac{1}{23}$	
$\frac{1}{24}$	
$\frac{1}{25}$	

2. Make up some of your own.

$\frac{1}{73}$	0.013698
$\frac{1}{\ }$	
$\frac{1}{\ }$	

$\frac{1}{\ }$	
$\frac{1}{\ }$	
$\frac{1}{\ }$	

Practice

3. $6\overline{)96}$ = _____

4. 91 / 5 = _____

5. _____ = 864 ÷ 8

6. 575 ÷ 7 = _____

Name Date Time

STUDY LINK 9•4

Fractions and Decimals to Percents

SRB 62 206 207

Do NOT use a calculator to convert these fractions to percents.
On the back of this page, show your work for Problems 3–6.

1. $\frac{34}{100}$ = _____%
2. $\frac{67}{100}$ = _____%
3. $\frac{42}{50}$ = _____%
4. $\frac{13}{25}$ = _____%
5. $\frac{17}{20}$ = _____%
6. $\frac{25}{125}$ = _____%

Use a calculator to convert these fractions to percents.

7. $\frac{23}{92}$ = _____%
8. $\frac{12}{40}$ = _____%
9. $\frac{20}{32}$ = _____%
10. $\frac{49}{70}$ = _____%
11. $\frac{60}{400}$ = _____%
12. $\frac{21}{56}$ = _____%

13. Describe how you used your calculator to convert the fractions in Problems 7–12 to percents.

_____

_____

_____

Do NOT use a calculator to convert these decimals to percents.

14. 0.86 = _____%
15. 0.03 = _____%
16. 0.140 = _____%
17. 0.835 = _____%

Practice

Order the fractions from smallest to largest.

18. $\frac{7}{16}, \frac{7}{8}, \frac{7}{12}, \frac{7}{9}$ _____
19. $\frac{7}{15}, \frac{3}{15}, \frac{8}{15}, \frac{4}{15}$ _____
20. $\frac{5}{9}, \frac{15}{16}, \frac{1}{4}, \frac{9}{10}$ _____

Name Date Time

STUDY LINK 9•5

Renaming Fractions as Percents

SRB 62 207

In 2001, there were about 2,317,000 marriages in the United States.
The table below shows the approximate number of marriages each month.

1. Use a calculator to find the percent of the total number of marriages that occurred each month. Round the answers to the nearest whole-number percent.

Month	Approximate Number of Marriages	Approximate Percent of Total Marriages
January	147,000	6%
February	159,000	
March	166,000	
April	166,000	
May	189,000	
June	237,000	
July	244,000	
August	225,000	
September	224,000	
October	217,000	
November	191,000	
December	152,000	

Source: U.S. Department of Health and Human Services

2. According to the table, what is the most popular month for a wedding? _____

What is the least popular month for a wedding? _____

3. Describe how you used your calculator to find the percent for each month.

_____

_____

Practice

Name all the factors of each number.

4. 63 _____

5. 28 _____

Name Date Time

STUDY LINK 9•6

Use Percents to Compare Fractions

SRB 62 207

1. The girls' varsity basketball team won 8 of the 10 games it played. The junior varsity team won 6 of 8 games. Which team has the better record? Explain your reasoning.

_____

_____

2. Complete the table of shots taken (not including free throws) during a game. Calculate the percent of shots made to the nearest whole percent.

Player	Shots Made	Shots Missed	Total Shots	Shots Made / Total Shots	% of Shots Made
1	5	12	17	$\frac{5}{17}$	29%
2	5	6			
3	3	0			
4	9	2			
5	4	3			
6	11	5			
7	6	4			
8	1	1			

3. The basketball game is tied. Your team has the ball. There is only enough time for one more shot. Based only on the information in the table, which player would you choose to take the shot? Why?

_____

_____

_____

_____

Practice

4. $\frac{1}{3} + \frac{1}{6} =$ _____ **5.** _____ $= \frac{3}{4} - \frac{1}{2}$ **6.** _____ $= \frac{7}{10} + \frac{1}{5}$ **7.** $\frac{5}{8} - \frac{1}{4} =$ _____

Name _____ Date _____ Time _____

STUDY LINK 9•7

Least-Populated Countries

SRB 38 39

The table below shows the approximate population for the 10 least-populated countries in the world. Use the data to estimate answers to the problems.

Country	Population
Vatican City	900
Tuvalu	11,000
Nauru	13,000
Palau	20,000
San Marino	28,000
Monaco	32,000
Liechtenstein	33,000
St. Kitts and Nevis	39,000
Antigua and Barbuda	68,000
Dominica	69,000

Source: Top Ten of Everything 2004

1. The population of Liechtenstein is about _____% of the population of Dominica.

2. What country's population is about 33% of Liechtenstein's population? _____

3. The population of Vatican City is about _____% of the population of Palau.

4. The population of the 10 countries listed is 314,900. What 3 country populations together equal about 50% of that total?

_____

5. The population of St. Kitts and Nevis is about _____% of Nauru's population.

Practice

6. 27 * 4 = _____

7. _____ = 508 * 8

8. _____ = 63 * 86

9. 849 * 52 = _____

Name Date Time

STUDY LINK 9•8

Multiplying Decimals

For each problem below, the multiplication has been done correctly, but the decimal point is missing in the answer. Correctly place the decimal point in the answer.

1. $6 * 4.3 = 2\ 5\ 8$

2. $72 * 6.8 = 4\ 8\ 9\ 6$

3. $0.96 * 47 = 4\ 5\ 1\ 2$

4. $5.12 * 22 = 1\ 1\ 2\ 6\ 4$

5. $8{,}457 * 9.8 = 8\ 2\ 8\ 7\ 8\ 6$

6. $0.04 * 140 = 5\ 6$

7. Explain how you decided where to place the decimal point in Problem 4.

Try This

Multiply. Show your work.

8. $5.9 * 36 =$ _____	**9.** $0.46 * 84 =$ _____	**10.** _____ $= 7.21 * 53$

Practice

11. _____ $= 96 \div 6$

12. $4\overline{)67} =$ _____

13. _____ $= 411 / 3$

14. $9\overline{)903} =$ _____

Name _____ Date _____ Time _____

STUDY LINK 9•9

Dividing Decimals

For each problem below, the division has been done correctly, but the decimal point is missing in the answer. Correctly place the decimal point in the answer.

1. 88.8 / 6 = 1 4 8

2. 1.35 / 5 = 2 7 0 0

3. 99.84 / 4 = 2 4 9 6

4. 2.58 / 3 = 8 6 0

5. 163.8 / 7 = 2 3 4

6. 233.28 / 4 = 5 8 3 2

7. Explain how you decided where to place the decimal point in Problem 3.

_____

_____

_____

Try This

Divide. Show your work.

8. $6\overline{)25.2}$

Answer: _____

9. $4\overline{)154.8}$

Answer: _____

10. $9\overline{)5.85}$

Answer: _____

Practice

11. _____ $= \frac{5}{8} + \frac{2}{8}$

12. $\frac{5}{9} - \frac{1}{3} =$ _____

13. _____ $= \frac{7}{10} + \frac{2}{10}$

14. $\frac{9}{10} - \frac{1}{2} =$ _____