Name _____ Date _____ Class _____

Practice C
Relating Decimals, Fractions, and Percents

Write the labels from each circle graph as percents.

1. 0.6 = _____%

   0.1 = _____%

   0.3 = _____%

2. $\frac{1}{6}$ = _____%

   $\frac{1}{4}$ = _____%

   $\frac{7}{12}$ = _____%

3. 0.06 = _____%

   0.18 = _____%

   0.41 = _____%

   $\frac{7}{20}$ = _____%

4. $\frac{1}{20}$ = _____%

   $\frac{1}{4}$ = _____%

   $\frac{11}{50}$ = _____%

   $\frac{12}{25}$ = _____%

5. Sara correctly answered 48 out of 50 questions on her last
math test. What percent is this?   _____

6. Thom made 9 out of 13 free throws in the basketball game.
What percent is this to the nearest percent?   _____

7. A grocer finds 11 spoiled oranges in a bag of 20. What percent
of the oranges are spoiled?   _____

8. In music class 16 out of 40 students prefer classical music.
What percent of students prefer classical music?   _____

9. At the dog show 21 out of 30 dogs were poodles. What percent
were poodles?   _____

10. Of the 150 students in the eighth grade, 6 were absent yesterday.
What percent of eighth graders were absent yesterday?   _____

11. A student has read 23 out of 41 pages assigned for homework.
What percent of the pages has the student read?   _____

12. Tish has 17 relatives that live out of state and 12 that live in state.
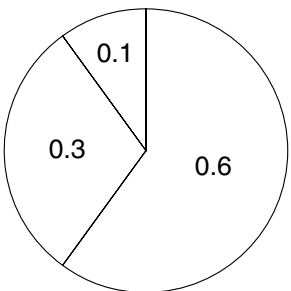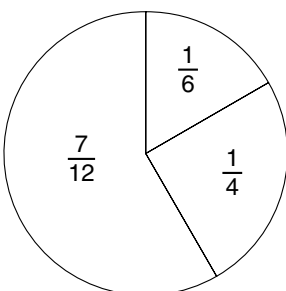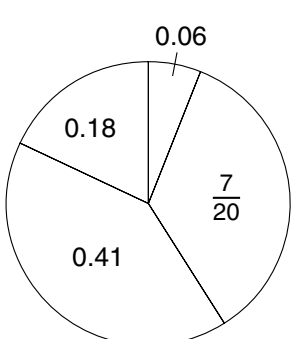What percent of her relatives live in state?   _____

Holt Middle School Math

Practice C
8-1 *Relating Decimals, Fractions, and Percents*

Write the labels from each circle graph as percents.

1. 0.6 = **60** %

   0.1 = **10** %

   0.3 = **30** %

   (circle graph labeled 0.1, 0.3, 0.6)

2. $\frac{1}{6}$ = **16$\frac{2}{3}$** %

   $\frac{1}{4}$ = **25** %

   $\frac{7}{12}$ = **58$\frac{1}{3}$** %

   (circle graph labeled $\frac{1}{6}$, $\frac{1}{4}$, $\frac{7}{12}$)

3. 0.06 = **6** %

   0.18 = **18** %

   0.41 = **41** %

   $\frac{7}{20}$ = **35** %

   (circle graph labeled 0.06, 0.18, 0.41, $\frac{7}{20}$)

4. $\frac{1}{20}$ = **5** %

   $\frac{1}{4}$ = **25** %

   $\frac{11}{50}$ = **22** %

   $\frac{12}{25}$ = **48** %

   (circle graph labeled $\frac{1}{20}$, $\frac{1}{4}$, $\frac{11}{50}$, $\frac{12}{25}$)

5. Sara correctly answered 48 out of 50 questions on her last math test. What percent is this? **96%**

6. Thom made 9 out of 13 free throws in the basketball game. What percent is this to the nearest percent? **69%**

7. A grocer finds 11 spoiled oranges in a bag of 20. What percent of the oranges are spoiled? **55%**

8. In music class 16 out of 40 students prefer classical music. What percent of students prefer classical music? **40%**

9. At the dog show 21 out of 30 dogs were poodles. What percent were poodles? **70%**

10. Of the 150 students in the eighth grade, 6 were absent yesterday. What percent of eighth graders were absent yesterday? **4%**

11. A student has read 23 out of 41 pages assigned for homework. What percent of the pages has the student read? **56%**

12. Tish has 17 relatives that live out of state and 12 that live in state. What percent of her relatives live in state? **41%**
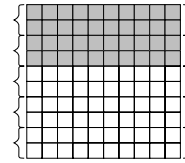
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Reteach
8-1 *Relating Decimals, Fractions, and Percents*

A **percent** (symbol %) is a *ratio*, where the comparison is to the number 100.

The ratio is then written in simplest form.

$$40\% = \frac{40}{100} = \frac{40 \div 20}{100 \div 20} = \frac{2}{5}$$

Write each percent as a ratio in simplest form.

1. 80% = $\frac{80}{100}$

   = $\frac{80 \div 20}{100 \div 20}$

   = $\frac{4}{5}$

2. 37.5% = $\frac{37.5}{100}$

   = $\frac{375}{1000}$

   = $\frac{375 \div 125}{1000 \div 125}$

   = $\frac{3}{8}$

3. 250% = $\frac{250}{100}$

   = $\frac{250 \div 50}{100 \div 50}$

   = $\frac{5}{2}$

Since a percent compares a number to 100, a percent can be written as a decimal. $40\% = \frac{40}{100} = 0.40$

Write each percent as a decimal.

4. 80% = $\frac{80}{100}$

   = **0.80**

5. 37.5% = $\frac{37.5}{100}$

   = $\frac{375}{1000}$

   = **0.375**

6. 250% = $\frac{250}{100}$

   = **2.50**

Use the results of Exercises 4–6 to complete.

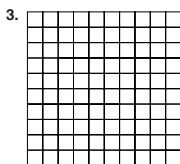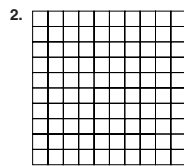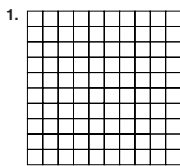|	Percent	Fraction	Decimal
7.	80%	$\frac{4}{5}$	**0.80**
8.	37.5%	$\frac{3}{8}$	**0.375**
9.	250%	$\frac{5}{2}$	**2.50**

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Challenge
8-1 *100% Filled*

Materials needed: colored pencils or pens

For each exercise, select from the box a different combination of numbers whose sum is 100%. An item may be used only once in a combination, but may be used again in a different combination. Write your selection on the line below the grid. Shade the squares in the grid with a different color for each number you selected.

68%	$\frac{1}{2}$	60%	$\frac{1}{20}$	1%	0.9	0.04	$\frac{13}{20}$	$\frac{1}{7}$
$\frac{3}{25}$	16%	55%	0.02	$\frac{1}{9}$	0.15	$\frac{1}{8}$	24%	0.44
0.06	$\frac{1}{6}$	$\frac{1}{4}$	29%	0.037	$\frac{1}{3}$	19%	$\frac{17}{50}$	

1. (grid)

2. (grid)

3. (grid)

Possible Combinations

0.15, 60%, $\frac{1}{4}$

55%, 0.44, 1%

19%, 1%, $\frac{1}{2}$, 24%, 0.06

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Problem Solving
8-1 *Relating Decimals, Fractions, and Percents*

Write the correct answer. Round to the nearest hundredth.

1. A survey showed that 42% of people responded that gathering at a campfire was their favorite camping activity. Write this percent as a decimal and as a fraction.

   0.42; $\frac{21}{50}$

2. Scientists have researched the ratio of brain weight to body size in different animals. The results are in the table below. What percent of each animal's body weight is brain weight?

3. A survey showed that 24% of people responded that enjoying the scenery was their favorite camping activity. Write this percent as a decimal and as a fraction.

   0.24; $\frac{6}{25}$

Animal	Brain Weight / Body Weight	Percent
Cat	$\frac{1}{100}$	**1%**
Dog	$\frac{1}{125}$	**0.8%**
Elephant	$\frac{1}{560}$	**0.18%**
Horse	$\frac{1}{600}$	**0.17%**
Human	$\frac{1}{40}$	**2.5%**
Mouse	$\frac{1}{40}$	**2.5%**

The top rated passers in the NFL for the 2001 regular season are given in the table. Choose the letter for the best answer. Round to the nearest hundredth.

4. Which player listed completed the highest percentage of passes in the 2001 season?
   A Brett Favre **C** Jeff Garcia
   B Rich Gannon **(D)** Kurt Warner

5. Which decimal is equivalent to the pass completion percentage of Kurt Warner?
   F 0.63 **(H)** 0.69
   G 0.66 **J** 0.62

6. What fraction of passes did Jeff Garcia complete?
   A $\frac{31}{50}$ **C** $\frac{504}{316}$
   (B) $\frac{79}{126}$ **D** $\frac{1}{2}$

Top Rated Passers: 2001 Regular Season

Player	Attempts	Completions
Kurt Warner	546	375
Rich Gannon	549	361
Jeff Garcia	504	316
Brett Favre	510	314

7. What percent of passes did Rich Gannon complete?
   F 62.70% **H** 75%
   (G) 65.76% **J** 162.08%

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