Chapter 8

School-Home Letter

Dear Family,

During the next few weeks, our math class will be learning about decimal place value through thousandths. We will also relate both fractions and money to place value and learn how to rename fractions as decimals.

You can expect to see homework that provides practice with naming decimals in different ways, including renaming as fractions.

Here is a sample of how your child will be taught to represent decimal place value.

Vocabulary

decimal A number with one or more digits to the right of the decimal point.

decimal point A symbol used to separate dollars from cents in money amounts and to separate the ones and tenths places in a decimal.

tenth One of ten equal parts

hundredth One of one hundred equal parts

thousandth One of one thousand equal parts

MODEL Decimal Place Value through Thousandths

This is how we will be expressing decimal place value in different forms.

Ones	.	Tenths	Hundredths	Thousandths
3	.	6	4	8

decimal point

Standard Form	3.648
Expanded Form	3 + 0.6 + 0.04 + 0.008
Word Form	three and six hundred forty-eight thousandths

Tips

A place-value chart can be used to help visually organize numbers in relation to the decimal place. The chart can be used to pair the numbers with words, and may enable a smooth transition between standard, expanded, and word form.

Capítulo 8

Carta para la casa

Querida familia,

Durante las próximas semanas, en la clase de matemáticas aprenderemos sobre el valor posicional decimal hasta los milésimos. También aprenderemos a relacionar tanto las fracciones como el dinero con el valor posicional y a convertir fracciones en decimales.

Llevaré a la casa tareas para practicar la expresión de decimales de diferentes maneras, incluso la conversión en fracciones.

Este es un ejemplo de la manera como aprenderemos a representar el valor posicional decimal.

Vocabulario

decimal Un número con uno o más dígitos a la derecha del punto decimal.

punto decimal Un símbolo usado para separar dólares de centavos en cantidades de dinero y para separar el lugar de las unidades y los décimos en decimales.

décimo Una de diez partes iguales.

centésimo Una de cien partes iguales.

milésimo Una de mil partes iguales.

MODELO Valor posicional decimal hasta los milésimos

Así es como expresaremos el valor posicional decimal en diferentes formas.

Unidades	.	Décimos	Centésimos	Milésimos
3	.	6	4	8

punto decimal

Forma normal	3.648
Forma desarrollada	3 + 0.6 + 0.04 + 0.008
En palabras	tres y seiscientos cuarenta y ocho milésimos

Pistas

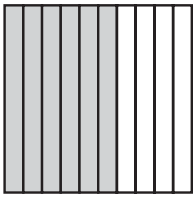
Una tabla de valor posicional se puede usar para ayudar a organizar visualmente números en relación con el lugar decimal. La tabla puede usarse para emparejar números con palabras y para facilitar la transición del uso de la forma normal a la forma desarrollada y la forma en palabras.

Name _____

Relate Tenths and Decimals

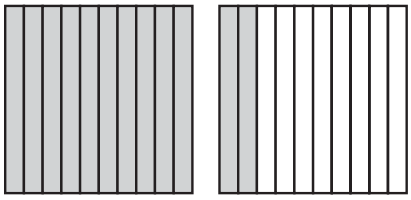
MA.4.A.2.3 Relate equivalent fractions and decimals with and without models, including locations on a number line.

Write the fraction or mixed number and the decimal shown by the model.

1. 

Think: The model is divided into 10 equal parts. Each part represents one tenth.

$\frac{6}{10}$; 0.6

2. 

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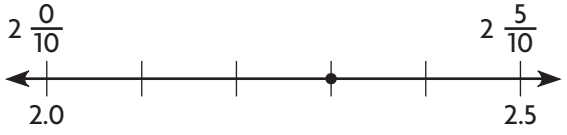

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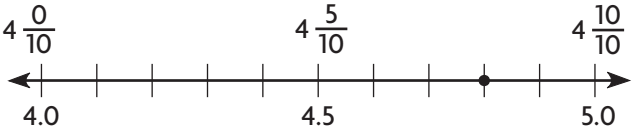
4.



_____

Write the fraction or mixed number as a decimal. You may use a model or number line.

5. $\frac{4}{10}$ _____

6. $3\frac{1}{10}$ _____

7. $\frac{7}{10}$ _____

8. $6\frac{5}{10}$ _____

9. $\frac{9}{10}$ _____

Problem Solving REAL WORLD

10. There are 10 sports balls in the equipment closet. Three are kickballs. Write the portion of the balls that are kickballs as a fraction, as a decimal, and in word form.

_____

11. Peyton has 2 pizzas. Each pizza is cut into 10 equal slices. She and her friends eat only 8 slices. What part of the pizzas is left? Write your answer as a decimal.

_____

Lesson Check (MA.4.A.2.3)

1. Valerie has 10 CDs in her music case. Seven of the CDs are pop music CDs. What is this amount written as a decimal?

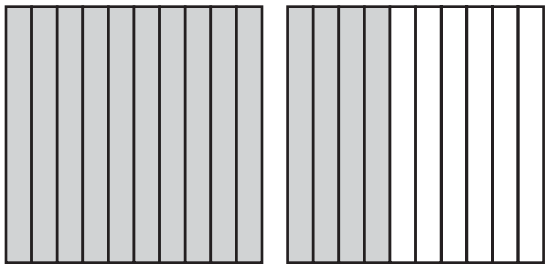
   Ⓐ 70.0

   Ⓑ 7.0

   Ⓒ 0.7

   Ⓓ 0.07

2. Which decimal amount is modeled below?



   Ⓕ 14.0

   Ⓖ 1.4

   Ⓗ 0.14

   Ⓘ 0.014

Review Grade 4 (MA.4.A.6.4)

SPIRAL REVIEW

3. How many factors does the product 13 have?

   Ⓐ 1

   Ⓑ 2

   Ⓒ 3

   Ⓓ 4

4. An art gallery has 6 paintings and 4 photographs they want to display in equal rows on a wall, with the same number of each type of art in each row. Which of the following could be the number of art pieces in each row?

   Ⓕ 2

   Ⓖ 3

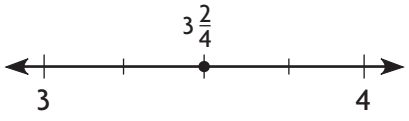
   Ⓗ 4

   Ⓘ 6

Look Back (MA.3.A.2.4, MA.4.A.2.3)

SPIRAL REVIEW

5. Which of the following is equivalent to the fraction modeled below?



   Ⓐ $3\frac{1}{8}$

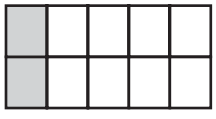
   Ⓑ $3\frac{1}{2}$

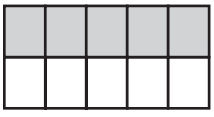
   Ⓒ $3\frac{3}{5}$

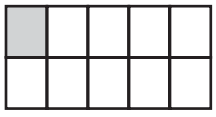
   Ⓓ $3\frac{2}{3}$

6. Which of the following models has a shaded area that is equivalent to the fraction $\frac{1}{5}$?

   Ⓕ 

   Ⓗ 

   Ⓖ 

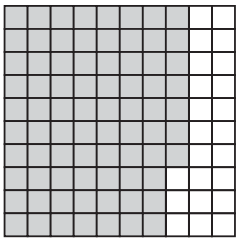
   Ⓘ 

Name _____

Relate Hundredths and Decimals

MA.4.A.2.3 Relate equivalent fractions and decimals with and without models, including locations on a number line.

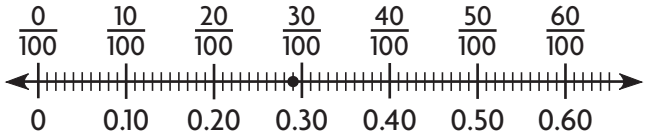
Write the fraction or mixed number and the decimal shown by the model.

1. 

Think: The whole is divided into one hundred equal parts, so each part is one hundredth.

_____

2.



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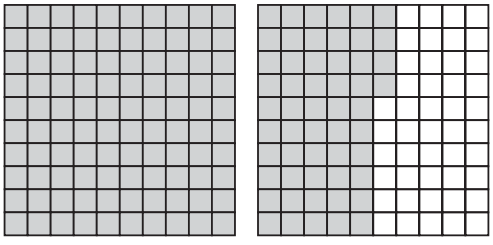
3. 

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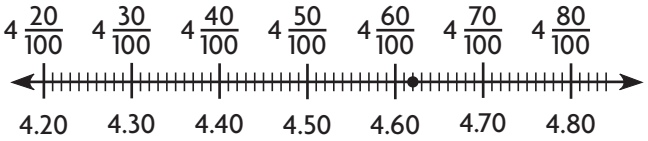
4.



_____

Write the fraction or mixed number as a decimal. You may use a model or number line.

5. $\frac{37}{100}$ _____

6. $8\frac{11}{100}$ _____

7. $\frac{98}{100}$ _____

8. $25\frac{50}{100}$ _____

9. $\frac{6}{100}$ _____

Problem Solving REAL WORLD

10. There are 100 pennies in a dollar. What fraction of a dollar is 61 pennies? Write it as a fraction, as a decimal, and in word form.

_____

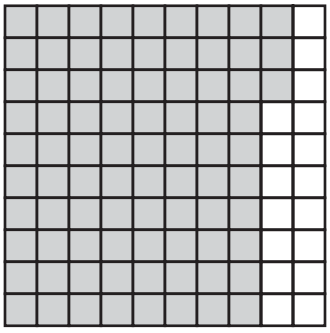
_____

11. Kylee has collected 100 souvenir thimbles from different places she has visited with her family. Twenty of the thimbles are carved from wood. Write the fraction of thimbles that are wooden as a decimal.

_____

Lesson Check (MA.4.A.2.3)

1. What is the shaded section of the model written as a decimal?



Ⓐ 83.0
Ⓒ 0.83
Ⓑ 8.30
Ⓓ 0.083

2. There were 100 questions on the unit test. Alondra got 97 of the questions correct. What decimal represents the fraction of questions Alondra got correct?

Ⓕ 0.097
Ⓖ 0.97
Ⓗ 9.70
Ⓘ 970.0

Review Grade 4 (MA.4.A.6.3)

SPIRAL REVIEW

3. Which of the following fractions is in simplest form?

Ⓐ $\frac{75}{100}$
Ⓒ $\frac{29}{100}$
Ⓑ $\frac{30}{100}$
Ⓓ $\frac{48}{100}$

4. Micah grabs a handful of 30 jellybeans. Nine of the jellybeans are cherry flavored. In simplest form, what fraction of the handful of jellybeans that Micah grabbed is cherry flavored?

Ⓕ $\frac{1}{4}$
Ⓗ $\frac{9}{30}$
Ⓖ $\frac{3}{10}$
Ⓘ $\frac{1}{3}$

Look Back (MA.3.A.2.4, MA.4.A.6.3)

SPIRAL REVIEW

5. Devon needs to use $1\frac{1}{2}$ cups of milk in a recipe, but he only has a $\frac{1}{4}$ cup measuring cup. How many fourths of a cup are in $1\frac{1}{2}$ cups?

Ⓐ 3
Ⓒ 6
Ⓑ 4
Ⓓ 8

6. One out of 4 toy cars in a pack is a blue. How many blue cars are in two packs of toy cars?

Ⓕ 2
Ⓗ 6
Ⓖ 4
Ⓘ 8

Name _____

Model Tenths and Hundredths

MA.4.A.2.2 Describe decimals as an extension of the base-ten number system.

Model the decimal using the least number of blocks. Use the flat to represent 1. Record by drawing a quick picture.

1. 0.41

2. 3.6

3. 2.83

4. 0.7

5. 1.08

6. 1.52

7. 2.35

8. 0.24

9. 2.06

Problem Solving REAL WORLD

10. Ryan is using the flat to represent 1 unit. If he wants to model the decimal 5.37 using the fewest number of base-ten blocks, how many of each will Ryan use?

_____

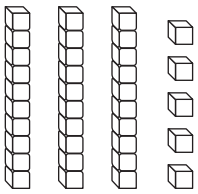
11. Karen says when the flat represents 1 unit, the decimal 1.46 can be modeled using 1 flat, 4 longs, and 6 small cubes. Shawn used 14 longs and 6 small cubes. Who is correct?

_____

TEST PREP

Lesson Check (MA.4.A.2.2)

1. If the flat represents 1, what decimal is represented by the model below?



Ⓐ 3.5
Ⓑ 0.35
Ⓒ 0.035
Ⓓ 0.0035

2. Cecil models the decimal 7.14 using base-ten blocks. If he uses a flat to represent 1 unit, which of the following describes a way Cecil could model the decimal?

Ⓕ 71 longs 4 small cubes
Ⓖ 7 flats 14 longs
Ⓗ 7 longs 14 small cubes
Ⓘ 71 flats 4 small cubes

Review Grade 4 (MA.4.A.6.4)

SPIRAL REVIEW

3. What are the first six multiples of 12?

Ⓐ 1, 2, 3, 4, 6, 12
Ⓑ 12, 14, 16, 18, 20, 22
Ⓒ 12, 24, 36, 48, 60, 72
Ⓓ 12, 24, 36, 50, 62, 74

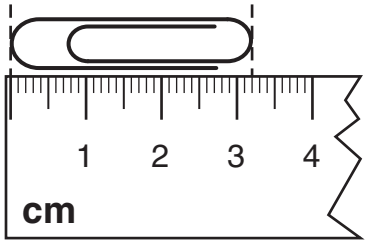
4. Max rides his bike for an hour every 2 days and jogs for a half hour every 3 days. April 30 was the last day he rode his bike and jogged. What is the next day Max will bike and jog on the same day?

Ⓕ May 4
Ⓖ May 6
Ⓗ May 9
Ⓘ May 12

Look Back (MA.3.G.5.2, MA.4.A.2.2)

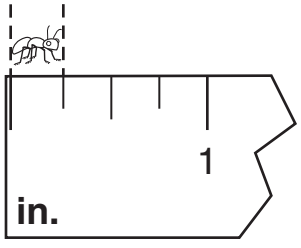
SPIRAL REVIEW

5. What is the length of the paper clip to the nearest centimeter?



Ⓐ 1 cm
Ⓑ 2 cm
Ⓒ 3 cm
Ⓓ 32 cm

6. What fraction of an inch does the ant measure?



Ⓕ $\frac{1}{8}$ in.
Ⓖ $\frac{1}{4}$ in.
Ⓗ $\frac{1}{3}$ in.
Ⓘ $\frac{1}{2}$ in.

Name _____

Explore Decimal Place Value

MA.4.A.2.2 Describe decimals as an extension of the base-ten number system.

Write the value of the underlined digit.

1. 6.2$\underline{4}$ — 4 hundredths or 0.04

2. 3.$\underline{2}$ _____

3. 9.0$\underline{7}$ _____

4. 0.4$\underline{8}$ _____

5. 1.$\underline{6}$5 _____

6. 0.$\underline{9}$ _____

7. 5.1$\underline{3}$ _____

8. 10.$\underline{8}$2 _____

Write the decimal in two other forms.

9. 7.32 _____

10. two and six tenths _____

11. 20 + 5 + 0.8 + 0.01 _____

12. 86.04 _____

Problem Solving REAL WORLD

Use the table below for 13 and 14.

Three runners finished a foot race with the following times.

Foot Race Times

Runner	Time (in seconds)
Erika	15.46
Andre	14.89
Conner	15.08

13. Which runner finished the race with a time that has the digit 8 in the hundredths place?

_____

14. What is Erika's time written in expanded form?

_____

Lesson Check (MA.4.A.2.2)

1. The Daytona International Speedway has a road coarse that is 3.56 miles in length. What is the value of the digit 6 in 3.56?

   Ⓐ six tens

   Ⓑ six ones

   Ⓒ six tenths

   Ⓓ six hundredths

2. At the 2008 Olympics in Beijing, the U.S. men's 400-meter relay team finished in first place by eight hundredths of a second. What is eight hundredths written in standard form?

   Ⓕ 0.008

   Ⓖ 0.08

   Ⓗ 0.8

   Ⓘ 800

Review Grade 4 (MA.4.A.6.3)

SPIRAL REVIEW

3. Which fraction is equivalent to the shaded area of the rectangle below?

   Ⓐ $\frac{1}{4}$

   Ⓑ $\frac{9}{16}$

   Ⓒ $\frac{2}{3}$

   Ⓓ $\frac{3}{4}$

4. Which of the following fractions are equivalent?

   Ⓕ $\frac{18}{45}, \frac{2}{5}$

   Ⓖ $\frac{5}{6}, \frac{25}{40}$

   Ⓗ $\frac{1}{4}, \frac{12}{50}$

   Ⓘ $\frac{20}{100}, \frac{2}{5}$

Look Back (MA.3.A.6.1, MA.4.A.6.1)

SPIRAL REVIEW

5. The total land area of Florida is 54,136 square miles. What is the value of the digit 4 in the number 54,136?

   Ⓐ 4 ones

   Ⓑ 4 hundreds

   Ⓒ 4 thousands

   Ⓓ 4 ten thousands

6. Which of the following numbers has the digit 9 in the ten thousands place?

   Ⓕ 39,042

   Ⓖ 40,923

   Ⓗ 54,093

   Ⓘ 93,420

Name _____

Relate Fractions, Decimals, and Money

MA.4.A.2.3 Relate equivalent fractions and decimals with and without models, including locations on a number line.

Write the total money amount. Then write the amount as a fraction of a dollar and as a decimal.

1.

$\$0.18; \frac{18}{100}; 0.18$

2.

Write the money amount and a decimal for the fraction of a dollar.

3. $\frac{25}{100}$ **4.** $\frac{79}{100}$ **5.** $\frac{31}{100}$ **6.** $\frac{8}{100}$ **7.** $\frac{42}{100}$

Write the money amount as a fraction of a dollar.

8. $0.87 **9.** $0.03 **10.** $0.66 **11.** $0.95 **12.** $1.00

Write the money amount as a fraction of a dollar, as a decimal, and as a money amount.

13. 2 quarters 2 dimes **14.** 3 dimes 4 pennies **15.** 8 nickels 12 pennies

Problem Solving REAL WORLD

16. Kate has 1 dime, 4 nickels, and 8 pennies. Write Kate's total amount as a fraction of a dollar.

17. Nolan says he has $\frac{75}{100}$ of a dollar. If he only has 3 coins, what are the coins?

TEST PREP

Lesson Check (MA.4.A.2.3)

1. Which of the following shows the total money amount shown below as a fraction of a dollar?

Ⓐ $\frac{43}{1}$

Ⓑ $\frac{43}{10}$

Ⓒ $\frac{43}{57}$

Ⓓ $\frac{43}{100}$

2. Crystal has $\frac{81}{100}$ of a dollar. Which of the following could be the coins Crystal has?

Ⓕ 3 quarters, 1 dime, 1 penny

Ⓖ 2 quarters, 6 nickels, 1 penny

Ⓗ 2 quarters, 21 pennies

Ⓘ 1 quarter, 4 dimes, 1 nickel, 1 penny

Review Grade 4 (MA.4.A.6.4)

SPIRAL REVIEW

3. Which number below is a common denominator of $\frac{1}{4}$ and $\frac{1}{6}$?

Ⓐ 2

Ⓑ 10

Ⓒ 12

Ⓓ 16

4. Two fractions share a common denominator of 36. Which of the following could be the two fractions?

Ⓕ $\frac{1}{4}, \frac{5}{9}$

Ⓖ $\frac{3}{16}, \frac{1}{2}$

Ⓗ $\frac{5}{8}, \frac{3}{4}$

Ⓘ $\frac{1}{3}, \frac{9}{14}$

Look Back (MA.3.A.2.1, MA.4.A.2.4)

SPIRAL REVIEW

5. Jordyn has 3 quarters. What fraction of a dollar does she have?

Ⓐ $\frac{3}{25}$

Ⓑ $\frac{1}{4}$

Ⓒ $\frac{1}{3}$

Ⓓ $\frac{3}{4}$

6. What fraction of a dollar does the coin below represent?

Ⓕ $\frac{1}{10}$

Ⓖ $\frac{1}{9}$

Ⓗ $\frac{1}{1}$

Ⓘ $\frac{10}{1}$

Name _____

Search for Patterns

Place-Value Relationships

MA.4.A.2.2 Describe decimals as an extension of the base-ten number system.

Solve each problem.

1. Bradley learns that a Florida panther can grow to 183 centimeters in length. What is this length in meters?

Remember: 1 meter = 100 centimeters

Think: Use the ten-to-one rule and patterns to help you find the amount in meters.

1.83 meters

2. A school is holding a penny drive to raise money for new gym equipment. Mr. O'Neil's class collects 2,458 pennies. What is the dollar amount of the amount of pennies that the class collects?

_____

3. A decade is 10 years and a century is 100 years. What part of a century is 60 years? Write the part of a century as a decimal.

_____

4. Damian runs $\frac{1}{10}$ of a mile. Then he walks $\frac{1}{10}$ of a mile. Finally, he jogs $\frac{1}{10}$ of a mile. If he continues this pattern, which activity will Damian do next after he has finished 1 mile of exercise?

_____

5. I am a number between 10 and 20. My tens digit is 1. Each digit to the right is twice as great as the digit before it. What is the value of the digit in the hundredths place?

_____

TEST PREP

Lesson Check (MA.4.A.2.2)

1. A reptile house has a Florida kingsnake that is 109 centimeters in length. How long is the kingsnake in meters?

   Ⓐ 10.9 meters Ⓒ 0.109 meter

   Ⓑ 1.09 meters Ⓓ 0.0109 meter

2. Which of the following numbers has a 6 in the tens place, a 7 in the tenths place, a 2 in the ones place, a 5 in the hundredths place, and a 1 in the hundreds place?

   Ⓕ 672.51 Ⓗ 162.75

   Ⓖ 572.61 Ⓘ 126.57

Review Grade 4 (MA.4.A.2.4)

SPIRAL REVIEW

3. A sloth spends $\frac{8}{10}$ of its life sleeping. Which is the best estimate of the fraction of its life that a sloth spends sleeping?

   Ⓐ $\frac{1}{4}$ Ⓒ $\frac{3}{4}$

   Ⓑ $\frac{1}{2}$ Ⓓ 1

4. Kiara is $5\frac{5}{12}$ feet tall. Which is the best estimate of Kiara's height to the nearest half foot?

   Ⓕ 5 feet Ⓗ $5\frac{1}{2}$ feet

   Ⓖ $5\frac{1}{4}$ feet Ⓘ $5\frac{3}{4}$ feet

Look Back (MA.3.A.6.2, MA.4.A.2.2)

SPIRAL REVIEW

5. Edgar saves the following amounts in his coin bank each day.

Edgar's Savings

Day	Amount Saved
1	25¢
2	50¢
3	75¢
4	$1.00

   If the pattern continues, how much money will Edgar save on Day 5?

   Ⓐ 25¢ Ⓒ $1.50

   Ⓑ $1.25 Ⓓ $2.00

6. As Layla walks to school, she passes by six houses with these house numbers.

   200 210 220 230 240 250

   If the pattern continues, which number would Layla most likely see on the seventh house she passes?

   Ⓕ 251

   Ⓖ 255

   Ⓗ 260

   Ⓘ 270

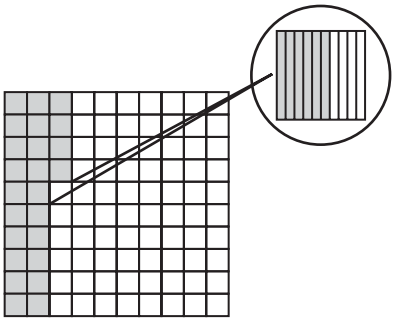
Name _____

Model Thousandths

MA.4.A.2.2 Describe decimals as an extension of the base-ten number system.

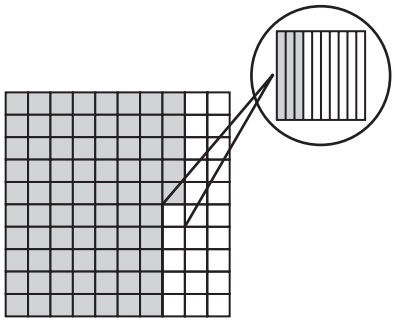
Write the fraction and the decimal shown by the shaded part.

1.



$\frac{246}{1,000}$; 0.246

2.



_____

Write each decimal as a fraction or mixed number. You may use a number line.

3. 0.385 _____

4. 5.042 _____

5. 0.908 _____

6. 11.006 _____

7. 18.721 _____

Write each fraction or mixed number as a decimal. You may use a number line.

8. $2\frac{613}{1,000}$ _____

9. $\frac{75}{1,000}$ _____

10. $33\frac{584}{1,000}$ _____

11. $6\frac{1}{1,000}$ _____

12. $\frac{999}{1,000}$ _____

Problem Solving REAL WORLD

13. An ant measures $\frac{12}{1,000}$ of a meter. What is this fraction written as a decimal?

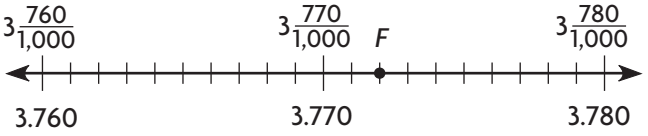
_____

14. Braden finishes a race in 9.835 seconds. What is this decimal written as a mixed number?

_____

Lesson Check (MA.4.A.2.2)

1. Which decimal is represented by Point *F* on the number line below?



Ⓐ 3.761 Ⓒ 3.772

Ⓑ 3.770 Ⓓ 3.779

2. Sam got a toy sailboat as a gift. He took it to a pond to see how fast the sailboat went around the pond. It sailed around the pond in 45.813 seconds. What is the decimal value of the digits 813?

Ⓕ 813 ones Ⓗ 813 hundredths

Ⓖ 813 tenths Ⓘ 813 thousandths

Review Grade 4 (MA.4.A.6.1)

SPIRAL REVIEW

3. Kendall thinks of an 8-digit number. The digit in the ten millions place is 3 times as great as the digit in the thousands place. The digit in the hundreds place is one less than the digit in the millions place. Which of the following could be Kendall's number?

Ⓐ 63,002,400 Ⓒ 97,003,600

Ⓑ 64,003,300 Ⓓ 98,003,900

4. The distance between Earth and Mars can be as great as two hundred forty-nine million miles at certain times in their orbits. Which of the following shows two hundred forty-nine million in standard form?

Ⓕ 2,000,049 Ⓗ 24,000,009

Ⓖ 2,490,000 Ⓘ 249,000,000

Look Back (MA.3.A.2.1, MA.4.A.2.3)

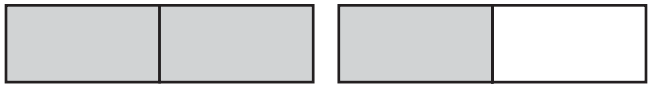
SPIRAL REVIEW

5. What fraction of the shapes below is stars?

Ⓐ $\frac{3}{2}$ Ⓒ $\frac{1}{2}$

Ⓑ $\frac{2}{3}$ Ⓓ $\frac{2}{5}$

6. What fraction of the shapes below is shaded?



Ⓕ $\frac{1}{2}$ Ⓗ $1\frac{1}{2}$

Ⓖ $\frac{1}{3}$ Ⓘ $\frac{3}{1}$

Name _____

Decimals to Thousandths

MA.4.A.2.1 Use decimals through the thousandths place to name numbers between whole numbers.

Write the decimal in two other ways.

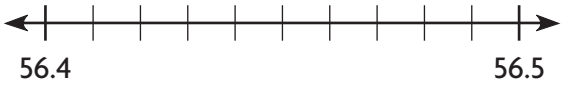
1. two and forty-eight thousandths

2.048; 2 + 0.04 + 0.008

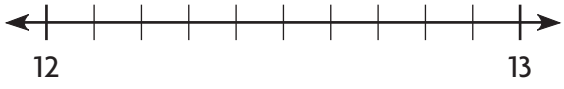
2. 30 + 8 + 0.7 + 0.009

Shade the part between the two numbers on the number line to show where the decimal number is located.

3. 56.463

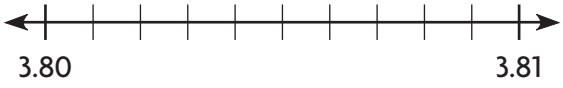


4. 12.94

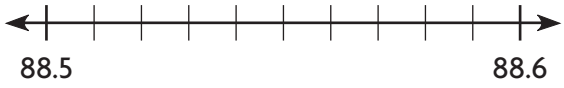


Locate and label the decimal.

5. 3.807



6. 88.52



Problem Solving REAL WORLD

7. The North American feather-winged beetle is 0.025 centimeters in length. Write 0.025 in two other ways.

8. Kendall and Manuel are studying termites. They read that a certain termite grows to 0.020 meter long. Kendall says this amount is twenty thousandths of a meter. Manuel says it is two hundreths of a meter. Who is correct?

Lesson Check (MA.4.A.2.1)

1. The wingspan of a Monarch butterfly is 0.089 meter. What is the value of the digit 9 in 0.089?

   Ⓐ 9 thousands
   Ⓑ 9 tenths
   Ⓒ 9 hundredths
   Ⓓ 9 thousandths

2. What is sixty-one and two hundred five thousandths written in standard form?

   Ⓕ 61.00205
   Ⓖ 61.0205
   Ⓗ 61.205
   Ⓘ 61,205

Review Grade 4 (MA.4.A.1.2)

SPIRAL REVIEW

3. A furniture store sells one type of couch for $645. If the store sold 32 of these couches last month, what was the total price of the 32 couches?

   Ⓐ $3,225
   Ⓑ $19,530
   Ⓒ $20,640
   Ⓓ $32,160

4. The distance between Angelica and her best friend's house is 2,067 feet. The distance between Angelica's house and the school is 4 times as great as this distance. What is the distance from Angelica's house to the school in feet?

   Ⓕ 1,068 feet
   Ⓖ 8,048 feet
   Ⓗ 8,068 feet
   Ⓘ 8,268 feet

Look Back (MA.3.A.6.1, MA.4.A.6.1)

SPIRAL REVIEW

5. Ruby's school raised $2,641 for a charity. What is the amount the school raised, to the nearest thousand?

   Ⓐ $2,000
   Ⓑ $2,600
   Ⓒ $2,640
   Ⓓ $3,000

6. Eli has 324 stamps collected in one album and 261 stamps in another album. About how many stamps does Eli have in all?

   Ⓕ 400
   Ⓖ 500
   Ⓗ 600
   Ⓘ 700

Name _____

Rename Fractions as Decimals

MA.4.A.2.3 Relate equivalent fractions and decimals with and without models, including locations on a number line.

Write a decimal for the fraction or mixed number.

1. $\frac{3}{4}$

Rewrite the fraction using a denominator of 10 or 100.

Think: $3 \times 25 = 75$ and $4 \times 25 = 100$.

0.75

2. $\frac{4}{5}$

3. $5\frac{7}{20}$

4. $23\frac{8}{25}$

5. $\frac{9}{4}$

6. $\frac{40}{100}$

7. $14\frac{4}{8}$

Write a fraction or mixed number for the decimal.

8. 0.36

9. 9.054

10. 15.67

11. 0.5

12. 6.02

13. 41.8

14. 1.345

15. 0.004

Problem Solving REAL WORLD

16. Cesar frosted 6 of the 25 cupcakes he baked with strawberry frosting. Write the portion of cupcakes with strawberry frosting as a decimal.

17. Rylee has finished watching $\frac{3}{5}$ of a DVD. Write the portion of the DVD that Rylee has watched as a decimal.

TEST PREP

Lesson Check (MA.4.A.2.3)

1. A pencil measures $5\frac{3}{4}$ inches. What is the length of the pencil written as a decimal?

   Ⓐ 5.34 inches

   Ⓑ 5.6 inches

   Ⓒ 5.75 inches

   Ⓓ 5.8 inches

2. Eleven out of 25 students in the chess club are beginners. What is the fraction of beginners in the club written as a decimal?

   Ⓕ 0.11

   Ⓖ 0.36

   Ⓗ 0.44

   Ⓘ 0.55

Review Grade 4 (MA.4.A.6.2)

SPIRAL REVIEW

3. How many groups of 21 can be subtracted from 882?

   Ⓐ 42 Ⓒ 54

   Ⓑ 44 Ⓓ 58

4. How many groups of 17 can be subtracted from 323?

   Ⓕ 13 Ⓗ 21

   Ⓖ 19 Ⓘ 23

Look Back (MA.3.A.2.1, MA.4.A.2.3)

SPIRAL REVIEW

5. Mario has 3 nickels in his pocket. What fraction of a dollar do 3 nickels represent?

   Ⓐ $\frac{3}{5}$ Ⓒ $\frac{15}{100}$

   Ⓑ $\frac{5}{20}$ Ⓓ $\frac{5}{100}$

6. Which of the following money amounts represents $\frac{1}{2}$ of a dollar?

   Ⓕ 2 dimes

   Ⓖ 10 nickels

   Ⓗ 60 pennies

   Ⓘ 3 quarters

Name _____

Chapter 8 Extra Practice

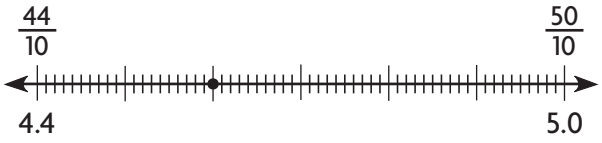
Lesson 8.1 (pp. 319–322)

Write the fraction or mixed number and the decimal shown by the model.

1.

_____

2.



_____

Write the fraction or mixed number as a decimal. You may use a model or number line.

3. $6\frac{3}{10}$ _____

4. $\frac{2}{10}$ _____

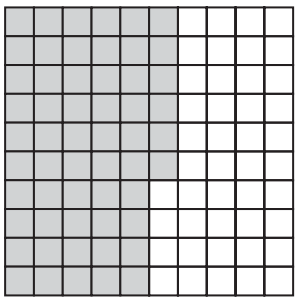
5. $3\frac{9}{10}$ _____

6. $5\frac{1}{10}$ _____

Lesson 8.2 (pp. 323–326)

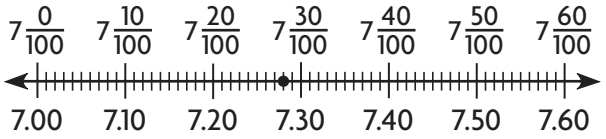
Write the fraction or the mixed number and decimal shown by the model.

1.



_____

2.



_____

Write each fraction or mixed number as a decimal. You may use a model or number line.

3. $\frac{6}{100}$ _____

4. $9\frac{72}{100}$ _____

5. $25\frac{43}{100}$ _____

6. $1\frac{50}{100}$ _____

7. There are 100 United States Senators. In 2007, there were 16 women in the Senate. That means $\frac{16}{100}$ of Senators were women. What is this number written as a decimal?

_____

8. Anya has a sheet of 100 stamps. She has used 23 of the stamps. What decimal represents the number of stamps Anya has used?

_____

Lesson 8.4 (pp. 331–334)

Write the value of the underlined digit.

1. $3.2\underline{4}$

2. $0.\underline{2}$

3. $0.5\underline{8}$

Write each decimal in two other forms.

4. two and seven tenths

5. $9 + 5 + 0.4 + 0.31$

6. 89.14

Lesson 8.5 (pp. 335–338)

Write the total money amount. Then write the amount as a fraction of a dollar and as a decimal.

1.

2.

Write the money amount as a fraction of a dollar, as a decimal, and as a money amount.

3. 4 dimes 7 pennies

4. 3 dimes 35 pennies

5. Sam has four dollars and thirty-two cents. What decimal names this amount?

6. Beth has $\frac{3}{4}$ of a dollar with three different coins. What coins might she have?

Lesson 8.6 (pp. 339–342)

1. Daniel has 45 cents in his pocket. What part of a dollar is 45 cents? Write the amount as a decimal.

2. Giant reed is a bamboo-like grass that can reach 6 meters tall. How many centimeters are in 6 meters?

3. Scientists discovered the fossils of a giant snake in the Amazon rainforest. They estimate the length of the snake to be about 43 feet, or 13 meters. How many centimeters are in 13 meters?

4. A giraffe can grow as tall 580 centimeters. How many meters are in 580 centimeters?

Lesson 8.8 (pp. 349–352)

Write the decimal in two other ways.

1. $11 + 1 + 0.2 + 0.04 + 0.006$

2. seventy-two thousandths

Shade the part between the two numbers on the number line to show where the decimal number is located.

3. 2.648

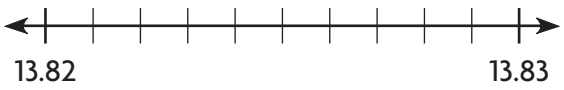
4. 45.83

Locate and label the decimal.

5. 5.346

6. 67.48

7. 13.824



8. 42.067

Lesson 8.9 (pp. 353–356)

Write a decimal for the fraction or mixed number.

1. $\frac{3}{5}$ _____

2. $4\frac{3}{6}$ _____

3. $\frac{1}{4}$ _____

4. $\frac{7}{14}$ _____

5. $3\frac{12}{16}$ _____

6. $\frac{5}{2}$ _____

7. $\frac{9}{5}$

_____

8. $\frac{8}{5}$

_____

9. $2\frac{12}{24}$

_____

Write a fraction for the decimal.

10. 0.18

_____

11. 5.86

_____

12. 0.793

_____

13. 33.022

_____

14. 0.925

_____

15. 17.44

_____

16. 0.529

_____

17. 0.83

_____

18. 9.41

_____

19. In a marathon, $\frac{7}{1{,}000}$ of the runners wear baseball caps. What decimal names this fraction?

_____

20. Judy has played in $\frac{2}{5}$ of 10 piano recitals. What decimal names the fraction of recitals in which Judy played?

_____

21. Ken's soccer team has won 16 of 20 games. What decimal names the fraction of games won?

_____

22. Frank has completed $\frac{4}{5}$ of his yard work. What part of his yard work does he still need to complete?

_____