Name _____

COMMON CORE STANDARDS CC.4.NF.3, CC.4.NF.3c, CC.4.NF.3d

Chapter 7 Extra Practice

Lesson 7.1

Use the model to write an equation.

1. 

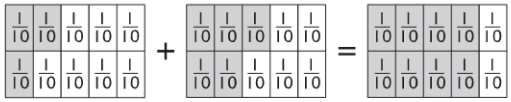
_____

2. 

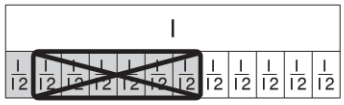
_____

Use the model to solve the equation.

3. $\frac{3}{10} + \frac{5}{10} =$ _____



4. $\frac{7}{12} - \frac{6}{12} =$ _____



Lesson 7.2

Write the fraction as a sum of unit fractions.

1. $\frac{2}{3} =$ _____

2. $\frac{3}{10} =$ _____

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

4. $\frac{5}{12} =$ _____

Lessons 7.3 - 7.5

Find the sum or difference. Use fraction strips to help.

1. $\frac{3}{8} + \frac{2}{8} =$ _____

2. $\frac{4}{5} + \frac{1}{5} =$ _____

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

4. $\frac{5}{6} - \frac{4}{6} =$ _____

5. $\frac{3}{4} - \frac{1}{4} =$ _____

6. $1 - \frac{7}{12} =$ _____

7. $\frac{7}{10} - \frac{3}{10} =$ _____

8. $\frac{2}{6} + \frac{4}{6} =$ _____

9. $\frac{5}{8} - \frac{4}{8} =$ _____

Lesson 7.6

Write each mixed number as a fraction and each fraction as a mixed number.

1. $4\frac{2}{3} =$ _____
2. $6\frac{1}{4} =$ _____
3. $\frac{11}{3} =$ _____
4. $\frac{16}{15} =$ _____

Lessons 7.7 - 7.8

Find the sum or difference.

1. $3\frac{1}{4} + 2\frac{3}{4}$
2. $1\frac{5}{12} + 2\frac{1}{12}$
3. $9\frac{5}{6} - 7\frac{1}{6}$
4. $9\frac{3}{10} - 1\frac{7}{10}$

_____ _____ _____ _____

Lesson 7.9

Use the properties and mental math to find the sum.

1. $\left(1\frac{1}{4} + 4\right) + 2\frac{3}{4}$
2. $\frac{3}{5} + \left(90\frac{2}{5} + 10\right)$
3. $3\frac{2}{6} + \left(2\frac{1}{6} + \frac{4}{6}\right)$
4. $\left(\frac{5}{8} + 2\frac{3}{8}\right) + 1\frac{3}{8}$

_____ _____ _____ _____

Lesson 7.10

1. Adrian jogs $\frac{3}{4}$ mile each morning. How many days will it take him to jog 3 miles?

_____

2. Trail mix is sold in 1-pound bags. Mary will buy some trail mix and re-package it so that each of the 15 members of her hiking club gets one $\frac{2}{5}$-pound bag. How many 1-pound bags of trail mix should Mary buy to have enough trail mix without leftovers?

_____

Chapter 8

School-Home Letter

Vocabulary

mixed number A number represented by a whole number and a fraction

multiple A number that is the product of a given number and a counting number

unit fraction A fraction that has 1 as its top number or numerator

Dear Family,

During the next few weeks, our math class will be learning how to multiply fractions and mixed numbers by whole numbers. We will learn to write a fraction as a product of a whole number and a unit fraction, and to find multiples of unit fractions.

You can expect to see homework that provides practice multiplying fractions and whole numbers with and without using models.

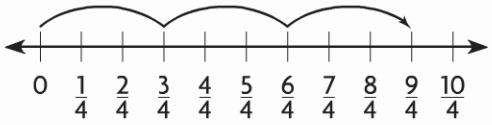
Here is a sample of how your child will be taught to use a number line to find multiples of a fraction.

MODEL Use a Number Line to Write Multiples of Fractions

Write $3 \times \frac{3}{4}$ as the product of a whole number and a unit fraction.

STEP 1

Start at 0. Draw jumps to find multiples of $\frac{3}{4}$: $\frac{3}{4}$, $\frac{6}{4}$, $\frac{9}{4}$.



STEP 2

Write the multiple as a product of a whole number and a unit fraction.

So, $3 \times \frac{3}{4} = \frac{9}{4} = 9 \times \frac{1}{4}$.

Tips

Renaming as a Mixed Number

When the numerator is greater than the denominator, the fraction can be renamed as a mixed number.

$$\frac{9}{4} = \frac{4}{4} + \frac{4}{4} + \frac{1}{4}$$
$$= 2 + \frac{1}{4}$$
$$= 2\frac{1}{4}$$

Activity

Use everyday situations, such as cooking and measures to help your child practice fraction multiplication.

Capítulo 8

Carta para la casa

Vocabulary

fracción unitaria Una fracción que tiene al 1 como numerador, es decir, arriba de la barra

múltiplo Un número que es el producto de cierto número y un número positivo distinto de cero

número mixto Un número que se representa por un número entero y una fracción

Querida familia,

Durante las próximas semanas, en la clase de matemáticas aprenderemos a multiplicar fracciones y números mixtos por números enteros. También aprenderemos a escribir fracciones como el producto de un número entero y una fracción unitaria y a hallar múltiplos de fracciones unitarias.

Llevaré a casa tareas para practicar la multiplicación de fracciones y números enteros usando modelos y sin modelos.

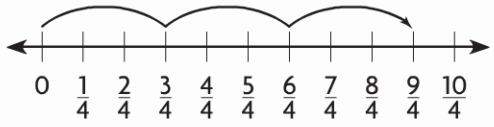
Este es un ejemplo de cómo vamos a usar una recta numérica para hallar los múltiplos de una fracción.

MODELO Usar una recta numérica para escribir múltiplos de fracciones

Escribe $3 \times \frac{3}{4}$ como el producto de un número entero y una fracción unitaria.

PASO 1

Comienza en 0. Dibuja saltos para hallar los múltiplos de $\frac{3}{4}$: $\frac{3}{4}$, $\frac{6}{4}$, $\frac{9}{4}$



PASO 2

Escribe el múltiplo como el producto de un número entero y una fracción unitaria.

Pistas

Expresarlo como un número mixto

Cuando el numerador es mayor que el denominador, la fracción se puede expresar como un número mixto.

$$\frac{9}{4} = \frac{4}{4} + \frac{4}{4} + \frac{1}{4}$$
$$= 2 + \frac{1}{4}$$
$$= 2\frac{1}{4}$$

Actividad

Use situaciones de la vida diaria, como cocinar y medir para ayudar a su hijo o hija a practicar la multiplicación con fracciones.

Name _____

Multiples of Unit Fractions

COMMON CORE STANDARD CC.4.NF.4a

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Write the fraction as a product of a whole number and a unit fraction.

1. $\frac{5}{6} =$ $5 \times \frac{1}{6}$
2. $\frac{7}{8} =$ _____
3. $\frac{5}{3} =$ _____
4. $\frac{9}{10} =$ _____
5. $\frac{3}{4} =$ _____
6. $\frac{11}{12} =$ _____
7. $\frac{4}{6} =$ _____
8. $\frac{8}{20} =$ _____
9. $\frac{13}{100} =$ _____

List the next four multiples of the unit fraction.

10. $\frac{1}{5}$, ____, ____, ____, ____
11. $\frac{1}{8}$, ____, ____, ____, ____

Problem Solving REAL WORLD

12. So far, Monica has read $\frac{5}{6}$ of a book. She has read the same number of pages each day for 5 days. What fraction of the book does Monica read each day?

_____

13. Nicholas buys $\frac{3}{8}$ pound of cheese. He puts the same amount of cheese on 3 sandwiches. How much cheese does Nicholas put on each sandwich?

_____

TEST PREP

Lesson Check (CC.4.NF.4a)

1. Selena walks from home to school each morning and back home each afternoon. Altogether, she walks $\frac{2}{3}$ mile each day. How far does Selena live from school?

   Ⓐ $\frac{1}{3}$ mile

   Ⓑ $\frac{2}{3}$ mile

   Ⓒ $1\frac{1}{3}$ miles

   Ⓓ 2 miles

2. Will uses $\frac{3}{4}$ cup of olive oil to make 3 batches of salad dressing. How much oil does Will use for one batch of salad dressing?

   Ⓐ $\frac{1}{4}$ cup

   Ⓑ $\frac{1}{3}$ cup

   Ⓒ $2\frac{1}{4}$ cups

   Ⓓ 3 cups

Spiral Review (CC.4.OA.4, CC.4.NF.1, CC.4.NF.3b, CC.4.NF.3d)

3. Liza bought $\frac{5}{8}$ pound of trail mix. She gives $\frac{1}{8}$ pound of trail mix to Michael. How much trail mix does Liza have left? **(Lesson 7.5)**

   Ⓐ $\frac{1}{8}$ pound

   Ⓑ $\frac{2}{8}$ pound

   Ⓒ $\frac{3}{8}$ pound

   Ⓓ $\frac{4}{8}$ pound

4. Leigh has a piece of rope that is $6\frac{2}{3}$ feet long. How do you write $6\frac{2}{3}$ as a fraction greater than 1? **(Lesson 7.6)**

   Ⓐ $\frac{11}{3}$

   Ⓑ $\frac{15}{3}$

   Ⓒ $\frac{20}{3}$

   Ⓓ $\frac{62}{3}$

5. Randy's house number is a composite number. Which of the following could be Randy's house number? **(Lesson 5.5)**

   Ⓐ 29

   Ⓑ 39

   Ⓒ 59

   Ⓓ 79

6. Mindy buys 12 cupcakes. Nine of the cupcakes have chocolate frosting and the rest have vanilla frosting. What fraction of the cupcakes have vanilla frosting? **(Lesson 6.3)**

   Ⓐ $\frac{1}{4}$

   Ⓑ $\frac{1}{3}$

   Ⓒ $\frac{2}{3}$

   Ⓓ $\frac{3}{4}$

Name _____

Multiples of Fractions

COMMON CORE STANDARD CC.4.NF.4b

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

List the next four multiples of the fraction.

1. $\frac{3}{5}$, ____, ____, ____, ____

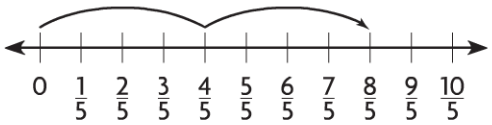
2. $\frac{2}{6}$, ____, ____, ____, ____

3. $\frac{4}{8}$, ____, ____, ____, ____

4. $\frac{5}{10}$, ____, ____, ____, ____

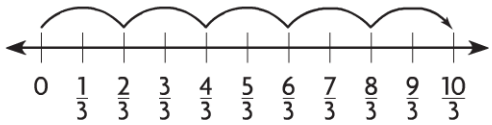
Write the product as the product of a whole number and a unit fraction.

5.



$2 \times \frac{4}{5} =$ _____

6.



$5 \times \frac{2}{3} =$ _____

Problem Solving REAL WORLD

7. Jessica is making 2 loaves of banana bread. She needs $\frac{3}{4}$ cup of sugar for each loaf. Her measuring cup can only hold $\frac{1}{4}$ cup of sugar. How many times will Jessica need to fill the measuring cup in order to get enough sugar for both loaves of bread?

_____

8. A group of four students is performing an experiment with salt. Each student must add $\frac{3}{8}$ teaspoon of salt to a solution. The group only has a $\frac{1}{8}$-teaspoon measuring spoon. How many times will the group need to fill the measuring spoon in order to perform the experiment?

_____

TEST PREP

Lesson Check (CC.4.NF.4b)

1. Eloise made a list of some multiples of $\frac{5}{8}$. Which of the following lists could be Eloise's list?

   Ⓐ $\frac{5}{8}, \frac{10}{16}, \frac{15}{24}, \frac{20}{32}, \frac{25}{40}$

   Ⓑ $\frac{5}{8}, \frac{10}{8}, \frac{15}{8}, \frac{20}{8}, \frac{25}{8}$

   Ⓒ $\frac{5}{8}, \frac{6}{8}, \frac{7}{8}, \frac{8}{8}, \frac{9}{8}$

   Ⓓ $\frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \frac{4}{8}, \frac{5}{8}$

2. David is filling five $\frac{3}{4}$-quart bottles with a sports drink. His measuring cup only holds $\frac{1}{4}$ quart. How many times will David need to fill the measuring cup in order to fill the 5 bottles?

   Ⓐ 5

   Ⓑ 10

   Ⓒ 15

   Ⓓ 20

Spiral Review (CC.4.NBT.6, CC.4.OA.3, CC.4.NF.3c, CC.NF.2)

3. Ira has 128 stamps in his stamp album. He has the same number of stamps on each of the 8 pages. How many stamps are on each page? (Lesson 4.11)

   Ⓐ 12

   Ⓑ 14

   Ⓒ 16

   Ⓓ 18

4. Ryan is saving up for a bike that costs $198. So far, he has saved $15 per week for the last 12 weeks. How much more money does Ryan need in order to be able to buy the bike? (Lesson 3.7)

   Ⓐ $8

   Ⓑ $18

   Ⓒ $48

   Ⓓ $180

5. Tina buys $3\frac{7}{8}$ yards of material at the fabric store. She uses it to make a skirt. Afterward, she has $1\frac{3}{8}$ yards of the fabric leftover. How many yards of material did Tina use? (Lesson 7.7)

   Ⓐ $1\frac{4}{8}$ yards

   Ⓑ $2\frac{1}{8}$ yards

   Ⓒ $2\frac{4}{8}$ yards

   Ⓓ $5\frac{2}{8}$ yards

6. Which list shows the fractions in order from **least** to **greatest**? (Lesson 6.8)

   Ⓐ $\frac{2}{3}, \frac{3}{4}, \frac{7}{12}$

   Ⓑ $\frac{7}{12}, \frac{3}{4}, \frac{2}{3}$

   Ⓒ $\frac{3}{4}, \frac{2}{3}, \frac{7}{12}$

   Ⓓ $\frac{7}{12}, \frac{2}{3}, \frac{3}{4}$

Name _____

Multiply a Fraction by a Whole Number Using Models

COMMON CORE STANDARD CC.4.NF.4b

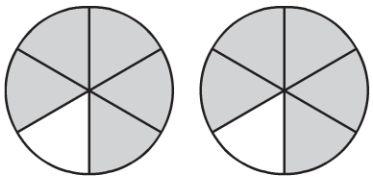
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Multiply.

1. $2 \times \frac{5}{6} =$ $\frac{10}{6}$

2. $3 \times \frac{2}{5} =$ _____

3. $7 \times \frac{3}{10} =$ _____



4. $3 \times \frac{5}{12} =$ _____

5. $6 \times \frac{3}{4} =$ _____

6. $4 \times \frac{2}{8} =$ _____

7. $5 \times \frac{2}{3} =$ _____

8. $2 \times \frac{7}{8} =$ _____

9. $6 \times \frac{4}{5} =$ _____

Problem Solving REAL WORLD

10. Matthew walks $\frac{5}{8}$ mile to the bus stop each morning. How far will he walk in 5 days?

_____

11. Emily uses $\frac{2}{3}$ cup of milk to make one batch of muffins. How many cups of milk will Emily use if she makes 3 batches of muffins?

_____

TEST PREP

Lesson Check (CC.4.NF.4b)

1. Aleta's puppy gained $\frac{3}{8}$ pound each week for 4 weeks. Altogether, how much weight did the puppy gain during the 4 weeks?

   Ⓐ $\frac{8}{12}$ pound

   Ⓑ $1\frac{2}{8}$ pounds

   Ⓒ $\frac{12}{8}$ pounds

   Ⓓ $4\frac{3}{8}$ pounds

2. Pedro mixes $\frac{3}{4}$ teaspoon of plant food into each gallon of water. How many teaspoons of plant food should Pedro mix into 5 gallons of water?

   Ⓐ $\frac{3}{20}$ teaspoon

   Ⓑ $\frac{4}{15}$ teaspoon

   Ⓒ $\frac{8}{4}$ teaspoons

   Ⓓ $\frac{15}{4}$ teaspoons

Spiral Review (CC.4.NF.2, CC.4.NF.3b, CC.4.NF.3c, CC.4.NF.4a)

3. Ivana has $\frac{3}{4}$ pound of hamburger meat. She makes 3 hamburger patties. Each patty weighs the same amount. How much does each hamburger patty weigh? (Lesson 8.1)

   Ⓐ $\frac{1}{4}$ pound

   Ⓑ $\frac{1}{3}$ pound

   Ⓒ $2\frac{1}{4}$ pounds

   Ⓓ 3 pounds

4. Which of the following expressions is NOT equal to $\frac{7}{10}$? (Lesson 7.2)

   Ⓐ $\frac{5}{10} + \frac{1}{10} + \frac{1}{10}$

   Ⓑ $\frac{2}{10} + \frac{2}{10} + \frac{3}{10}$

   Ⓒ $\frac{3}{10} + \frac{3}{10} + \frac{2}{10}$

   Ⓓ $\frac{4}{10} + \frac{2}{10} + \frac{1}{10}$

5. Lance wants to find the total length of 3 boards. He uses the expression $3\frac{1}{2} + \left(2 + 4\frac{1}{2}\right)$. How can Lance rewrite the expression using both the Associative and Commutative Properties of Addition? (Lesson 7.9)

   Ⓐ $5 + 4\frac{1}{2}$

   Ⓑ $\left(3\frac{1}{2} + 2\right) + 4\frac{1}{2}$

   Ⓒ $2 + \left(3\frac{1}{2} + 4\frac{1}{2}\right)$

   Ⓓ $3\frac{1}{2} + \left(4\frac{1}{2} + 2\right)$

6. Which of the following statements is true? (Lesson 6.6)

   Ⓐ $\frac{5}{8} > \frac{9}{10}$

   Ⓑ $\frac{5}{12} > \frac{1}{3}$

   Ⓒ $\frac{3}{6} > \frac{4}{5}$

   Ⓓ $\frac{1}{2} > \frac{3}{4}$

Name _____

Multiply a Fraction or Mixed Number by a Whole Number

COMMON CORE STANDARD CC.4.NF.4c

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Multiply. Write the product as a mixed number.

1. $5 \times \frac{3}{10} =$ $1\frac{5}{10}$

2. $3 \times \frac{3}{5} =$ _____

3. $5 \times \frac{3}{4} =$ _____

4. $4 \times 1\frac{1}{5} =$ _____

5. $2 \times 2\frac{1}{3} =$ _____

6. $5 \times 1\frac{1}{6} =$ _____

7. $2 \times 2\frac{7}{8} =$ _____

8. $7 \times 1\frac{3}{4} =$ _____

9. $8 \times 1\frac{3}{5} =$ _____

Problem Solving REAL WORLD

10. Brielle exercises for $\frac{3}{4}$ hour each day for 6 days in a row. Altogether, how many hours does she exercise during the 6 days?

_____

11. A recipe for quinoa calls for $2\frac{2}{3}$ cups of milk. Conner wants to make 4 batches of quinoa. How much milk does he need?

_____

TEST PREP

Lesson Check (CC.4.NF.4c)

1. A mother is $1\frac{3}{4}$ times as tall as her son. Her son is 3 feet tall. How tall is the mother?

   Ⓐ $4\frac{3}{4}$ feet

   Ⓑ $5\frac{1}{4}$ feet

   Ⓒ $5\frac{1}{2}$ feet

   Ⓓ $5\frac{3}{4}$ feet

2. The cheerleaders are making a banner that is 8 feet wide. The length of the banner is $1\frac{1}{3}$ times the width of the banner. How long is the banner?

   Ⓐ $8\frac{1}{3}$ feet

   Ⓑ $8\frac{3}{8}$ feet

   Ⓒ $10\frac{1}{3}$ feet

   Ⓓ $10\frac{2}{3}$ feet

Spiral Review (CC.4.NF.3c, CC.4.NF.4a, CC.4.NF.4b)

3. Karleigh walks $\frac{5}{8}$ mile to school every day. How far does she walk to school in 5 days? (Lesson 8.3)

   Ⓐ $\frac{5}{40}$ mile

   Ⓑ $\frac{25}{40}$ mile

   Ⓒ $\frac{10}{8}$ miles

   Ⓓ $\frac{25}{8}$ miles

4. Which number is a multiple of $\frac{4}{5}$? (Lesson 8.2)

   Ⓐ $\frac{8}{10}$

   Ⓑ $\frac{12}{15}$

   Ⓒ $\frac{16}{20}$

   Ⓓ $\frac{12}{5}$

5. Jo cut a key lime pie into 8 equal-size slices. The next day, $\frac{7}{8}$ of the pie is left. Jo puts each slice on its own plate. How many plates does she need? (Lesson 8.1)

   Ⓐ 5

   Ⓑ 6

   Ⓒ 7

   Ⓓ 8

6. Over the weekend, Ed spent $1\frac{1}{4}$ hours doing his math homework and $1\frac{3}{4}$ hours doing his science project. Altogether, how much time did Ed spend doing homework over the weekend? (Lesson 7.7)

   Ⓐ 3 hours

   Ⓑ $2\frac{3}{4}$ hours

   Ⓒ $2\frac{1}{2}$ hours

   Ⓓ 2 hours

Name _____

Problem Solving • Comparison Problems with Fractions

COMMON CORE STANDARD CC.4.NF.4c

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Read each problem and solve.

1. A shrub is $1\frac{2}{3}$ feet tall. A small tree is 3 times as tall as the shrub. How tall is the tree?

t is the height of the tree, in feet.

$t = 3 \times 1\frac{2}{3}$

$t = 3 \times \frac{5}{3}$

$t = \frac{15}{3}$

$t = 5$

So, the tree is 5 feet tall.

5 feet

2. You run $1\frac{3}{4}$ miles each day. Your friend runs 4 times as far as you do. How far does your friend run each day?

_____

3. At the grocery store, Ayla buys $1\frac{1}{3}$ pounds of ground turkey. Tasha buys 2 times as much ground turkey as Ayla. How much ground turkey does Tasha buy?

_____

4. When Nathan's mother drives him to school, it takes $\frac{1}{5}$ hour. When Nathan walks to school, it takes him 4 times as long to get to school. How long does it take Nathan to walk to school?

_____

TEST PREP

Lesson Check (CC.4.NF.4c)

1. A Wilson's Storm Petrel is a small bird with a wingspan of $1\frac{1}{3}$ feet. A California Condor is a larger bird with a wingspan almost 7 times as wide as the wingspan of the petrel. About how wide is the wingspan of the California Condor?

   Ⓐ $\frac{4}{21}$ foot

   Ⓑ $2\frac{1}{3}$ feet

   Ⓒ $7\frac{1}{3}$ feet

   Ⓓ $9\frac{1}{3}$ feet

2. The walking distance from the Empire State Building in New York City to Times Square is about $\frac{9}{10}$ mile. The walking distance from the Empire State Building to Sue's hotel is about 8 times as far. About how far is Sue's hotel from the Empire State Building?

   Ⓐ $\frac{9}{80}$ mile

   Ⓑ $\frac{72}{80}$ mile

   Ⓒ $1\frac{7}{10}$ miles

   Ⓓ $7\frac{2}{10}$ miles

Spiral Review (CC.4.OA.4, CC.4.NF.2, CC.4.NF.3d, CC.4.NF.4c)

3. Which of the following expressions is NOT equal to $3 \times 2\frac{1}{4}$? **(Lesson 8.4)**

   Ⓐ $3 \times \frac{9}{4}$

   Ⓑ $(3 \times 2) + \left(3 \times \frac{1}{4}\right)$

   Ⓒ $6\frac{3}{4}$

   Ⓓ $3 \times 2 + \frac{1}{4}$

4. At a bake sale, Ron sells $\frac{7}{8}$ of an apple pie and $\frac{5}{8}$ of a cherry pie. Altogether, how much pie does he sell at the bake sale? **(Lesson 7.5)**

   Ⓐ $\frac{2}{8}$

   Ⓑ $\frac{12}{16}$

   Ⓒ $\frac{12}{8}$

   Ⓓ $\frac{35}{8}$

5. On a ruler, which measurement is between $\frac{3}{16}$ inch and $\frac{7}{8}$ inch? **(Lesson 6.8)**

   Ⓐ $\frac{1}{16}$ inch

   Ⓑ $\frac{1}{8}$ inch

   Ⓒ $\frac{11}{16}$ inch

   Ⓓ $\frac{15}{16}$ inch

6. Which of the following numbers is composite? **(Lesson 5.5)**

   Ⓐ 4

   Ⓑ 3

   Ⓒ 2

   Ⓓ 1

Name _____

COMMON CORE STANDARDS CC.4.NF.4a, CC.4.NF.4b, CC.4.NF.4c

Chapter 8 Extra Practice

Lesson 8.1

Write the fraction as a product of a whole number and a unit fraction.

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

2. $\frac{7}{8} =$ _____

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

List the next four multiples of the unit fraction.

4. $\frac{1}{2}$, ____, ____, ____, ____

5. $\frac{1}{6}$, ____, ____, ____, ____

Lesson 8.2

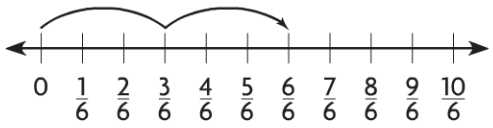
List the next four multiples of the fraction.

1. $\frac{3}{10}$, ____, ____, ____, ____

2. $\frac{7}{12}$, ____, ____, ____, ____

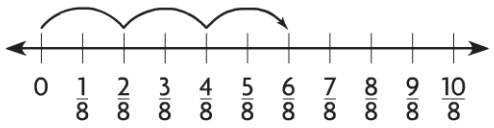
Write the product as the product of a whole number and a unit fraction.

3.



$2 \times \frac{3}{6} =$ _____

4.



$3 \times \frac{2}{8} =$ _____

Lesson 8.3

Multiply.

1. $3 \times \frac{7}{10} =$ _____

2. $5 \times \frac{4}{8} =$ _____

3. $4 \times \frac{6}{12} =$ _____

4. $2 \times \frac{3}{4} =$ _____

5. $6 \times \frac{3}{5} =$ _____

6. $7 \times \frac{2}{10} =$ _____

Lesson 8.4

Multiply. Write the product as a mixed number.

1. $4 \times \frac{8}{10} =$ _____

2. $3 \times \frac{5}{6} =$ _____

3. $2 \times 3\frac{1}{3} =$ _____

4. $4 \times 2\frac{2}{5} =$ _____

5. $5 \times 1\frac{7}{8} =$ _____

6. $3 \times 3\frac{3}{4} =$ _____

Lesson 8.5

1. A shrub in Pam's back yard is about $1\frac{3}{8}$ feet tall. A small tree in her back yard is 7 times as tall as the shrub. About how tall is the tree?

_____

2. A puppy weighs $\frac{9}{10}$ pound. Its mother weighs 8 times as much. How much does the mother weigh?

_____

Chapter 9

School-Home Letter

Dear Family,

During the next few weeks, our math class will relate both fractions and money to place value and will learn how to rename fractions as decimals. We will also add fractional parts of 10 and 100 and compare decimals through hundredths.

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 write a decimal as a fraction.

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

equivalent decimals Two or more decimals that name the same amount

hundredth One of one hundred equal parts

tenth One of ten equal parts

MODEL Write Hundredths as a Fraction

This is how we will use place value to help write a decimal as a fraction.

Ones	.	Tenths	Hundredths
0	.	6	4

decimal point

Think: 0.64 is the same as 6 tenths and 4 hundredths, or 64 hundredths.

So, $0.64 = \frac{64}{100}$.

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 form, word form, and the decimal or fraction.

Activity

Use the relationship between dollars and cents and work together to express the value of a penny, nickel, dime, and quarter as a decimal and as a fraction of a dollar. Then make small groups of coins and help your child write the value of each group as a decimal and as a fraction.

Capítulo 9

Carta para la casa

Querida familia,

Durante las próximas semanas, en la clase de matemáticas relacionaremos tanto las fracciones como el dinero con el valor posicional y aprenderemos a convertir fracciones en decimales. También sumaremos partes fraccionales de 10 y de 100 y compararemos decimales hasta los centésimos.

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 escribir un decimal como una fracción.

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

decimales equivalentes Dos o más decimales que nombran la misma cantidad

centésimo Una de cien partes iguales

décimo Una de diez partes iguales

MODELO Escribir centésimos como una fracción

Así es como usaremos el valor posicional para escribir un decimal como una fracción

Unidades	.	Décimos	Centésimos
0	.	6	4

punto decimal

Piensa: 0.64 es lo mismo que 6 décimos y cuatro centésimos, o 64 centésimos.

Por tanto, $0.64 = \frac{64}{100}$.

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 en palabras y a la fracción decimal.

Actividad

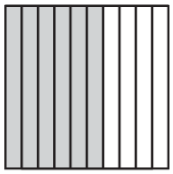
Usen la relación entre dólares y centavos y trabajen juntos para expresar el valor de una moneda de uno, de cinco, de diez y de veinticinco centavos en forma decimal y como una fracción de dólar. Luego hagan pequeños grupos de monedas y ayude a su hijo/a a escribir el valor de cada grupo en forma decimal y como fracción.

Name _____

Relate Tenths and Decimals

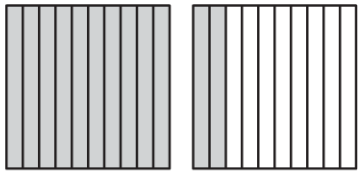
COMMON CORE STANDARD CC.4.NF.6
Understand decimal notation for fractions, and compare decimal fractions.

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

1. 

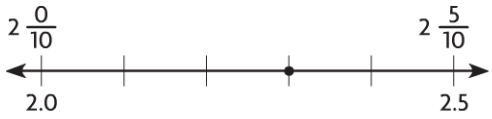
Think: The model is divided into 10 equal parts. Each part represents one tenth.

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

2. 

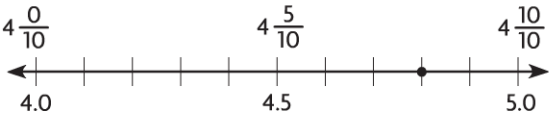
_____

3.



_____

4.



_____

Write the fraction or mixed number as a decimal.

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 14 slices. What part of the pizzas did they eat? Write your answer as a decimal.

_____

TEST PREP

Lesson Check (CC.4.NF.6)

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?

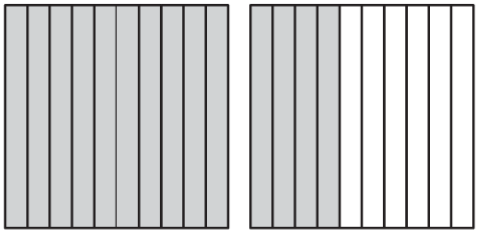
   Ⓐ 70.0

   Ⓑ 7.0

   Ⓒ 0.7

   Ⓓ 0.07

2. Which decimal amount is modeled below?



   Ⓐ 140.0

   Ⓑ 14.0

   Ⓒ 1.4

   Ⓓ 0.14

Spiral Review (CC.4.OA.4, CC.4.NF.1, CC.4.NF.3b)

3. Which number is a factor of 13? (Lesson 5.1)

   Ⓐ 1

   Ⓑ 3

   Ⓒ 4

   Ⓓ 7

4. An art gallery has 18 paintings and 4 photographs displayed 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 rows? (Lesson 5.3)

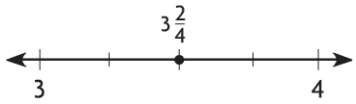
   Ⓐ 2 rows

   Ⓑ 3 rows

   Ⓒ 4 rows

   Ⓓ 6 rows

5. How do you write the mixed number shown as a fraction greater than 1? (Lesson 7.6)



   Ⓐ $\frac{32}{5}$

   Ⓑ $\frac{14}{4}$

   Ⓒ $\frac{6}{4}$

   Ⓓ $\frac{4}{4}$

6. Which of the following models has an amount shaded that is equivalent to the fraction $\frac{1}{5}$? (Lesson 6.1)

   Ⓐ 

   Ⓒ 

   Ⓑ 

   Ⓓ 

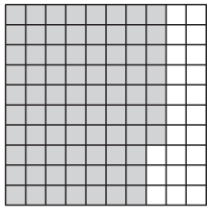
Name _____

Relate Hundredths and Decimals

COMMON CORE STANDARD CC.4.NF.6

Understand decimal notation for fractions, and compare decimal fractions.

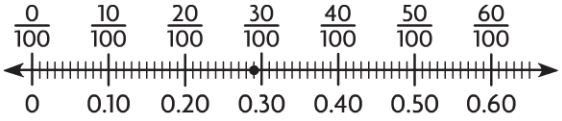
Write the fraction or mixed number and the decimal shown by the model.

1. 

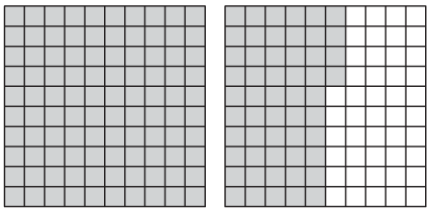
Think: The whole is divided into one hundred equal parts, so each part is one hundredth.

$\frac{77}{100}$; 0.77

2.

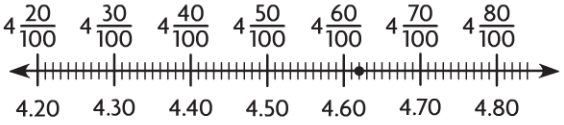


_____

3. 

_____

4.



_____

Write the fraction or mixed number as a decimal.

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.

_____

_____

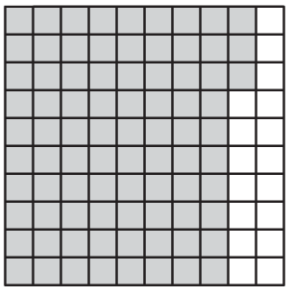
11. Kylee has collected 100 souvenir thimbles from different places she has visited with her family. Twenty of the thimbles are carved from wood. Write the fraction of thimbles that are wooden as a decimal.

_____

TEST PREP

Lesson Check (CC.4.NF.6)

1. Which decimal represents the shaded section of the model below?



Ⓐ 830.0
Ⓒ 8.30
Ⓑ 83.0
Ⓓ 0.83

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

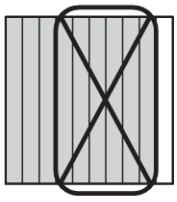
Ⓐ 0.97
Ⓑ 9.70
Ⓒ 90.70
Ⓓ 970.0

Spiral Review (CC.4.OA.5, CC.4.NF.3b, CC.4.NF.3d, CC.4.NF.4c)

3. Which is equivalent to $\frac{7}{8}$? (Lesson 7.2)

Ⓐ $\frac{5}{8} + \frac{3}{8}$
Ⓑ $\frac{4}{8} + \frac{1}{8} + \frac{1}{8}$
Ⓒ $\frac{3}{8} + \frac{2}{8} + \frac{2}{8}$
Ⓓ $\frac{2}{8} + \frac{2}{8} + \frac{1}{8} + \frac{1}{8}$

4. What is $\frac{9}{10} - \frac{6}{10}$? (Lesson 7.4)



Ⓐ $\frac{1}{10}$
Ⓒ $\frac{4}{10}$
Ⓑ $\frac{3}{10}$
Ⓓ $\frac{6}{10}$

5. Misha used $\frac{1}{4}$ of a carton of 12 eggs to make an omelet. How many eggs did she use? (Lesson 8.4)

Ⓐ 2
Ⓑ 3
Ⓒ 4
Ⓓ 6

6. Kurt used the rule *add* 4, *subtract* 1 to generate a pattern. The first term in his pattern is 5. Which number could be in Kurt's pattern? (Lesson 5.6)

Ⓐ 4
Ⓑ 6
Ⓒ 10
Ⓓ 14

Name _____

Equivalent Fractions and Decimals

COMMON CORE STANDARD CC.4.NF.5

Understand decimal notation for fractions, and compare decimal fractions.

Write the number as hundredths in fraction form and decimal form.

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

$\frac{5}{10} = \frac{5 \times 10}{10 \times 10} = \frac{50}{100}$

Think: 5 tenths is the same as 5 tenths and 0 hundredths. Write 0.50.

$\frac{50}{100}$; 0.50

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

3. 0.2

4. 0.8

Write the number as tenths in fraction form and decimal form.

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

6. $\frac{10}{100}$

7. 0.60

Problem Solving REAL WORLD

8. Billy walks $\frac{6}{10}$ mile to school each day. Write $\frac{6}{10}$ as hundredths in fraction form and in decimal form.

9. Four states have names that begin with the letter A. This represents 0.08 of all the states. Write 0.08 as a fraction.

TEST PREP

Lesson Check (CC.4.NF.5)

1. The fourth-grade students at Harvest School make up 0.3 of all students at the school. Which fraction is equivalent to 0.3?

   Ⓐ $\frac{3}{10}$

   Ⓑ $\frac{30}{10}$

   Ⓒ $\frac{3}{100}$

   Ⓓ $\frac{33}{100}$

2. Kyle and his brother have a marble set. Of the marbles, 12 are blue. This represents $\frac{50}{100}$ of all the marbles. Which decimal is equivalent to $\frac{50}{100}$?

   Ⓐ 50

   Ⓑ 5.0

   Ⓒ 0.50

   Ⓓ 5,000

Spiral Review (CC.4.OA.5, CC.4.NF.1, CC.4.NF.4c, CC4.NF.6)

3. Jesse won his race by $3\frac{45}{100}$ seconds. What is this number written as a decimal? **(Lesson 9.2)**

   Ⓐ 0.345

   Ⓑ 3.45

   Ⓒ 34.5

   Ⓓ 345

4. Marge cut 16 pieces of tape for mounting pictures on poster board. Each piece of tape was $\frac{3}{8}$ inch long. How much tape did Marge use? **(Lesson 8.4)**

   Ⓐ 2 inches

   Ⓑ 4 inches

   Ⓒ 5 inches

   Ⓓ 6 inches

5. Of Katie's pattern blocks, $\frac{9}{12}$ are triangles. What is $\frac{9}{12}$ in simplest form? **(Lesson 6.3)**

   Ⓐ $\frac{1}{4}$

   Ⓑ $\frac{2}{3}$

   Ⓒ $\frac{3}{4}$

   Ⓓ $\frac{9}{12}$

6. A number pattern has 75 as its first term. The rule for the pattern is *subtract* 6. What is the sixth term? **(Lesson 5.6)**

   Ⓐ 39

   Ⓑ 45

   Ⓒ 51

   Ⓓ 69

Name _____

Relate Fractions, Decimals, and Money

COMMON CORE STANDARD CC.4.NF.6
Understand decimal notation for fractions, and compare decimal fractions.

Write the total money amount. Then write the amount as a fraction or a mixed number and as a decimal in terms of dollars.

1.

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

2.

Write as a money amount and as a decimal in terms of dollars.

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 in terms of dollars.

8. $0.87 _____

9. $0.03 _____

10. $0.66 _____

11. $0.95 _____

12. $1.00 _____

Write the total money amount. Then write the amount as a fraction and as a decimal in terms of dollars.

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 in terms 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 (CC.4.NF.6)

1. Which of the following names the total money amount shown as a fraction in terms of a dollar?

Ⓐ $\frac{43}{1}$ Ⓒ $\frac{43}{57}$

Ⓑ $\frac{43}{10}$ Ⓓ $\frac{43}{100}$

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

Spiral Review (CC.4.NF.1, CC.4.NF.6)

3. Joel gives $\frac{1}{3}$ of his baseball cards to his sister. Which fraction is equivalent to $\frac{1}{3}$? (Lesson 6.2)

Ⓐ $\frac{3}{5}$ Ⓒ $\frac{8}{9}$

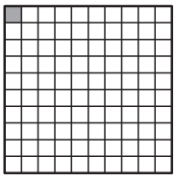
Ⓑ $\frac{2}{6}$ Ⓓ $\frac{4}{10}$

4. Penelope bakes pretzels. She salts $\frac{3}{8}$ of the pretzels. Which fraction is equivalent to $\frac{3}{8}$? (Lesson 6.2)

Ⓐ $\frac{9}{24}$ Ⓒ $\frac{3}{16}$

Ⓑ $\frac{15}{20}$ Ⓓ $\frac{1}{5}$

5. Which decimal is shown by the model? (Lesson 9.2)



Ⓐ 10.0 Ⓒ 0.1

Ⓑ 1.0 Ⓓ 0.01

6. Mr. Guzman has 100 cows on his dairy farm. Of the cows, 57 are Holstein. What decimal represents the portion of cows that are Holstein? (Lesson 9.2)

Ⓐ 0.43

Ⓑ 0.57

Ⓒ 5.7

Ⓓ 57.0

Name _____

Problem Solving • Money

PROBLEM SOLVING
Lesson 9.5

COMMON CORE STANDARD CC.4.MD.2
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Use the *act it out* strategy to solve.

1. Carl wants to buy a bicycle bell that costs $4.50. Carl has saved $2.75 so far. How much more money does he need to buy the bell?

Use 4 $1 bills and 2 quarters to model $4.50. Remove bills and coins that have a value of $2.75. First, remove 2 $1 bills and 2 quarters.

Next, exchange one $1 bill for 4 quarters and remove 1 quarter.

Count the amount that is left.
So, Carl needs to save $1.75 more.

$1.75

2. Together, Xavier, Yolanda, and Zachary have $4.44. If each person has the same amount, how much money does each person have?

_____

3. Marcus, Nan, and Olive each have $1.65 in their pockets. They decide to combine the money. How much money do they have altogether?

_____

4. Jessie saves $6 each week. In how many weeks will she have saved at least $50?

_____

5. Becca has $12 more than Cece. Dave has $3 less than Cece. Cece has $10. How much money do they have altogether?

_____

TEST PREP

Lesson Check (CC.4.MD.2)

1. Four friends earned $5.20 for washing a car. They shared the money equally. How much did each friend get?

   Ⓐ $1.05

   Ⓑ $1.30

   Ⓒ $1.60

   Ⓓ $20.80

2. Which represents the value of one $1 bill and 5 quarters?

   Ⓐ $1.05

   Ⓑ $1.25

   Ⓒ $1.50

   Ⓓ $2.25

Spiral Review (CC.4.OA.4, CC.4.NF.1, CC.4.NF.2, CC.4.NF.6)

3. Bethany has 9 pennies. What fraction of a dollar is this? (Lesson 9.4)

   Ⓐ $\frac{9}{100}$

   Ⓑ $\frac{9}{10}$

   Ⓒ $\frac{90}{100}$

   Ⓓ $\frac{99}{100}$

4. Michael made $\frac{9}{12}$ of his free throws at practice. What is $\frac{9}{12}$ in simplest form? (Lesson 6.3)

   Ⓐ $\frac{1}{4}$

   Ⓑ $\frac{3}{9}$

   Ⓒ $\frac{1}{2}$

   Ⓓ $\frac{3}{4}$

5. I am a prime number between 30 and 40. Which number could I be? (Lesson 5.5)

   Ⓐ 31

   Ⓑ 33

   Ⓒ 36

   Ⓓ 39

6. Georgette is using the benchmark $\frac{1}{2}$ to compare fractions. Which statement is correct? (Lesson 6.6)

   Ⓐ $\frac{3}{8} > \frac{1}{2}$

   Ⓑ $\frac{2}{5} < \frac{1}{2}$

   Ⓒ $\frac{7}{12} < \frac{1}{2}$

   Ⓓ $\frac{9}{10} = \frac{1}{2}$

Name _____

Add Fractional Parts of 10 and 100

COMMON CORE STANDARD CC.4.NF.5

Understand decimal notation for fractions, and compare decimal fractions.

Find the sum.

1. $\frac{2}{10} + \frac{43}{100}$

$\frac{20}{100} + \frac{43}{100} = \frac{63}{100}$

$\frac{63}{100}$

Think: Write $\frac{2}{10}$ as a fraction with a denominator of 100:

$\frac{2 \times 10}{10 \times 10} = \frac{20}{100}$

2. $\frac{17}{100} + \frac{6}{10}$

3. $\frac{9}{100} + \frac{4}{10}$

4. $\frac{7}{10} + \frac{23}{100}$

5. $\$0.48 + \$0.30$

6. $\$0.25 + \$0.34$

7. $\$0.66 + \$0.06$

Problem Solving REAL WORLD

8. Ned's frog jumped $\frac{38}{100}$ meter. Then his frog jumped $\frac{4}{10}$ meter. How far did Ned's frog jump in all?

9. Keiko walks $\frac{5}{10}$ kilometer from school to the park. Then she walks $\frac{19}{100}$ kilometer from the park to her home. How far does Keiko walk in all?

TEST PREP

Lesson Check (CC.4.NF.5)

1. In a fish tank, $\frac{2}{10}$ of the fish were orange and $\frac{5}{100}$ of the fish were striped. What fraction of the fish were orange or striped?

   Ⓐ $\frac{7}{10}$

   Ⓑ $\frac{52}{100}$

   Ⓒ $\frac{25}{100}$

   Ⓓ $\frac{7}{100}$

2. Greg spends $\$0.45$ on an eraser and $\$0.30$ on a pen. How much money does Greg spend in all?

   Ⓐ $\$3.45$

   Ⓑ $\$0.75$

   Ⓒ $\$0.48$

   Ⓓ $\$0.15$

Spiral Review (CC.4.NF.1, CC.4.NF.3d, CC.4.MD.2)

3. Phillip saves $8 each month. How many months will it take him to save at least $60? (Lesson 9.5)

   Ⓐ 6 months

   Ⓑ 7 months

   Ⓒ 8 months

   Ⓓ 9 months

4. Ursula and Yi share a submarine sandwich. Ursula eats $\frac{2}{8}$ of the sandwich. Yi eats $\frac{3}{8}$ of the sandwich. How much of the sandwich do the two friends eat? (Lesson 7.5)

   Ⓐ $\frac{1}{8}$

   Ⓑ $\frac{4}{8}$

   Ⓒ $\frac{5}{8}$

   Ⓓ $\frac{6}{8}$

5. A carpenter has a board that is 8 feet long. He cuts off two pieces. One piece is $3\frac{1}{2}$ feet long and the other is $2\frac{1}{3}$ feet long. How much of the board is left? (Lesson 7.10)

   Ⓐ $2\frac{1}{6}$ feet

   Ⓑ $2\frac{5}{6}$ feet

   Ⓒ $3\frac{1}{6}$ feet

   Ⓓ $3\frac{5}{6}$ feet

6. Jeff drinks $\frac{2}{3}$ of a glass of juice. Which fraction is equivalent to $\frac{2}{3}$? (Lesson 6.2)

   Ⓐ $\frac{1}{3}$

   Ⓑ $\frac{3}{2}$

   Ⓒ $\frac{3}{6}$

   Ⓓ $\frac{8}{12}$