Chapter 2

School-Home Letter

Vocabulary

reciprocal One of two numbers whose product is 1. For example, $\frac{3}{5}$ and $\frac{5}{3}$ are reciprocals.

Dear Family,

Throughout the next few weeks, our math class will be learning about multiplying and dividing fractions. We will also be learning how to estimate products and quotients of fractions.

You can expect to see homework with real-world problems that involve these operations.

Here is a sample of how your child was taught to divide two mixed numbers.

MODEL Divide mixed numbers.

Divide. $2\frac{2}{7} \div 2\frac{2}{3}$

STEP 1

Write the mixed numbers as fractions.

$2\frac{2}{7} \div 2\frac{2}{3} = \frac{16}{7} \div \frac{8}{3}$

STEP 2

Use the reciprocal of the divisor to write a multiplication problem.

$= \frac{16}{7} \times \frac{3}{8}$

STEP 3

Simplify.

$= \frac{\overset{2}{\cancel{16}}}{7} \times \frac{3}{\cancel{8}_{1}}$

STEP 4

Multiply.

$= \frac{6}{7}$

Tips

Checking for Reasonable Answers

When the divisor is less than 1, the quotient is greater than the dividend. When the divisor is greater than 1, the quotient is less than the dividend.

Activity

Find an object in your home, such as a ribbon, that can easily be cut into four equal pieces by folding it upon itself. Measure the object to the nearest eighth of an inch. Work together to predict the length of each of the four pieces after the object is cut. Check your prediction by measuring the length of one of the four equal pieces.

Capítulo 2

Carta para la casa

Vocabulario

recíproco Uno o dos números cuyos productos dan como resultado 1. Por ejemplo $\frac{3}{5}$ y $\frac{5}{3}$ son recíprocos.

Querida familia,

Durante las próximas semanas, en la clase de matemáticas aprenderemos a multiplicar y dividir fracciones. También aprenderemos a estimar productos y cocientes de fracciones.

Llevaré a la casa tareas con problemas del mundo real que involucren estas operaciones.

Este es un ejemplo de la manera como aprenderemos a dividir dos números mixtos.

MODELO Dividir números mixtos.

Divide. $2\frac{2}{7} \div 2\frac{2}{3}$

PASO 1

Escribe los números mixtos como fracciones.

$\frac{22}{7} \div \frac{22}{3} = \frac{16}{7} \div \frac{8}{3}$

PASO 2

Usa los recíprocos del divisor para escribir un problema de multiplicación.

$= \frac{16}{7} \times \frac{3}{8}$

PASO 3

Simplifica.

$= \frac{\overset{2}{\cancel{16}}}{7} \times \frac{3}{\cancel{8}_{1}}$

PASO 4

Multiplica.

$= \frac{6}{7}$

Pistas

Comprobar la respuestas sea razonable

Cuando el divisor es menor que 1, el cociente es mayor que el dividendo. Cuando el divisor es mayor que 1, el cociente es menor que el dividendo.

Actividad

Encuentre un objeto en su hogar, como un listón, que pueda ser fácilmente cortado en pedazos al doblarlo. Mida el objeto al octavo de pulgada más cercano. Trabajen juntos para predecir la longitud de cada una de los cuatro pedazos después de que el objeto haya sido cortado. Comprueben su predicción al medir la longitud de uno de los cuatro pedazos iguales.

Name _____

Fractions and Decimals

COMMON CORE STANDARD—6.NS.6C
Apply and extend previous understandings of numbers to the system of rational numbers.

Write as a fraction or as a mixed number in simplest form.

1. 0.52

$0.52 = \frac{52}{100}$

$= \frac{52 \div 4}{100 \div 4} = \frac{13}{25}$

2. 0.02

3. 4.8

4. 6.025

Write as a decimal. Tell whether the decimal terminates or repeats.

5. $\frac{17}{25}$

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

7. $4\frac{13}{20}$

8. $7\frac{8}{11}$

Identify a decimal and a fraction or mixed number in simplest form for each point.

9. Point *A*

10. Point *D*

11. Point *C*

12. Point *B*

Problem Solving Real World

13. Grace sold $\frac{5}{8}$ of her stamp collection. What is this amount as a decimal?

14. What if you scored a 0.80 on a test? What fraction of the test, in simplest form, did you answer correctly?

Lesson Check (6.NS.6c)

1. After a storm, Michael measured $6\frac{7}{8}$ inches of snow. What is this amount as a decimal?

2. A recipe calls for 3.75 cups of flour. What is this amount as a mixed number in simplest form?

Spiral Review (6.NS.2, 6.NS.3, 6.NS.4)

3. Gina bought 2.3 pounds of red apples and 2.42 pounds of green apples. They were on sale for $0.75 a pound. How much did the apples cost altogether?

4. Ken has 4.66 pounds of walnuts, 2.1 pounds of cashews, and 8 pounds of peanuts. He mixes them together and divides them equally among 18 bags. How many pounds of nuts are in each bag?

5. Mia needs to separate 450 pens into 18 packs. Each pack will have the same number of pens. How many pens should be put in each pack?

6. Evan buys 19 tubes of watercolor paint for $50.35. What is the cost of each tube of paint?

Name _____

Compare and Order Fractions and Decimals

COMMON CORE STANDARD—6.NS.6C
Apply and extend previous understandings of numbers to the system of rational numbers.

Write <, >, or =.

1. $0.64 \bigcirc \frac{7}{10}$ — $0.64 < 0.7$

2. $0.48 \bigcirc \frac{6}{15}$

3. $0.75 \bigcirc \frac{7}{8}$

4. $7\frac{1}{8} \bigcirc 7.025$

Order from least to greatest.

5. $\frac{7}{12}, 0.75, \frac{5}{6}$

6. $0.5, 0.41, \frac{3}{5}$

7. $3.25, 3\frac{2}{5}, 3\frac{3}{8}$

8. $0.9, \frac{8}{9}, 0.86$

Order from greatest to least.

9. $0.7, \frac{7}{9}, \frac{7}{8}$

10. $0.2, 0.19, \frac{3}{5}$

11. $6\frac{1}{20}, 6.1, 6.07$

12. $2\frac{1}{2}, 2.4, 2.35, 2\frac{1}{8}$

Problem Solving Real World

13. One day it snowed $3\frac{3}{8}$ inches in Altoona and 3.45 inches in Bethlehem. Which city received less snow that day?

14. Malia and John each bought 2 pounds of sunflower seeds. Each ate some seeds. Malia has $1\frac{1}{3}$ pounds left, and John has $1\frac{2}{5}$ pounds left. Who ate more sunflower seeds?

Lesson Check (6.NS.6c)

1. Andrea has $3\frac{7}{8}$ yards of purple ribbon, 3.7 yards of pink ribbon, and $3\frac{4}{5}$ yards of blue ribbon. List the numbers in order from least to greatest.

2. Nassim completed $\frac{18}{25}$ of the math homework. Kara completed 0.7 of it. Debbie completed $\frac{5}{8}$ of it. List the numbers in order from greatest to least.

Spiral Review (6.NS.6c, 6.NS.3, 6.NS.4)

3. Tyler bought $3\frac{7}{16}$ pounds of oranges. Write this amount using a decimal.

4. At the factory, a baseball card is placed in every 9th package of cereal. A football card is placed in every 25th package of the cereal. What is the first package that gets both a baseball card and a football card?

5. $15.30 is divided among 15 students. How much does each student receive?

6. Carrie buys 4.16 pounds of apples for $5.20. How much does 1 pound cost?

Name _____

Multiply Fractions

COMMON CORE STANDARD—6.NS.4
Compute fluently with multi-digit numbers and find common factors and multiples.

Find the product. Write it in simplest form.

1. $\frac{4}{5} \times \frac{7}{8} = \frac{28}{40} = \frac{7}{10}$

2. $3 \times \frac{1}{6}$

3. $\frac{5}{9} \times \frac{3}{4}$

4. $\frac{4}{7} \times \frac{1}{2}$

5. $\frac{1}{8} \times 20$

6. $\frac{4}{5} \times \frac{3}{8}$

7. $\frac{6}{7} \times \frac{7}{9}$

8. $1\frac{1}{8} \times \frac{1}{9}$

9. $\frac{1}{14} \times 28$

10. $\frac{3}{4} \times \frac{1}{3} \times \frac{2}{5}$

11. Karen raked $\frac{3}{5}$ of the yard. Minni raked $\frac{1}{3}$ of the amount Karen raked. How much of the yard did Minni rake?

12. $\frac{3}{8}$ of the pets in the pet show are dogs. $\frac{2}{3}$ of the dogs have long hair. What fraction of the pets are dogs with long hair?

Evaluate using the order of operations.

13. $\left(\frac{1}{2} + \frac{3}{8}\right) \times 8$

14. $\frac{3}{4} \times \left(1 - \frac{1}{9}\right)$

15. $4 \times \frac{1}{8} \times \frac{3}{10}$

16. $6 \times \left(\frac{4}{5} + \frac{2}{10}\right) \times \frac{2}{3}$

Problem Solving Real World

17. Jason ran $\frac{5}{7}$ of the distance around the school track. Sara ran $\frac{4}{5}$ of Jason's distance. What fraction of the total distance around the track did Sara run?

18. A group of students attend a math club. Half of the students are boys and $\frac{4}{9}$ of the boys have brown eyes. What fraction of the group are boys with brown eyes?

Lesson Check (6.NS.4)

1. Veronica's mom left $\frac{3}{4}$ of a cake on the table. Her brothers ate $\frac{1}{2}$ of it. What fraction of the cake did they eat?

2. One lap around the school track is $\frac{5}{8}$ mile. Carin ran $3\frac{1}{2}$ laps. How far did she run?

Spiral Review (6.NS.3, 6.NS.4, 6.NS.6c)

3. Tom bought $2\frac{5}{16}$ pounds of peanuts and 2.45 pounds of cashews. Which did he buy more of? Explain.

4. Eve has 24 stamps each valued at $24.75. What is the total value of her stamps?

5. Naomi went on a 6.5-mile hike. In the morning, she hiked 1.75 miles, rested, and then hiked 2.4 more miles. She completed the hike in the afternoon. How much farther did she hike in the morning than in the afternoon?

6. A bookstore owner has 48 science fiction books and 30 mysteries he wants to sell quickly. He will make discount packages with one type of book in each. He wants the most books possible in each package, but all packages must contain the same number of books. How many packages can he make? How many packages of each type of book does he have?

Name _____

Simplify Factors

COMMON CORE STANDARD—6.NS.4
Compute fluently with multi-digit numbers and find common factors and multiples.

Find the product. Simplify before multiplying.

1. $\frac{8}{9} \times \frac{5}{12} = \frac{\overset{2}{\cancel{8}} \times 5}{9 \times \underset{3}{\cancel{12}}} = \frac{10}{27}$

2. $\frac{3}{4} \times \frac{16}{21}$ _____

3. $\frac{15}{20} \times \frac{2}{5}$ _____

4. $\frac{9}{18} \times \frac{2}{3}$ _____

5. $\frac{9}{10} \times \frac{5}{27}$ _____

6. $\frac{3}{4} \times \frac{7}{30}$ _____

7. $\frac{25}{26} \times \frac{1}{5}$ _____

8. $\frac{8}{15} \times \frac{15}{32}$ _____

9. $\frac{12}{21} \times \frac{7}{9}$ _____

10. $\frac{1}{15} \times \frac{5}{8}$ _____

11. $\frac{18}{22} \times \frac{8}{9}$ _____

12. $\frac{2}{7} \times \frac{21}{32}$ _____

Problem Solving Real World

13. Amber has a $\frac{4}{5}$ -pound bag of colored sand. She uses $\frac{1}{2}$ of the bag for an art project. How much sand does she use for the project?

_____

14. Tyler has $\frac{3}{4}$ month to write a book report. He finished the report in $\frac{2}{3}$ that time. How much time did it take Tyler to write the report?

_____

Lesson Check (6.NS.4)

Find each product. Simplify before multiplying.

1. At Susie's school, $\frac{5}{8}$ of all students play sports. Of the students who play sports, $\frac{2}{5}$ play soccer. What fraction of the students in Susie's school play soccer?

2. A box of popcorn weighs $\frac{15}{16}$ pounds. The box contains $\frac{1}{3}$ buttered popcorn and $\frac{2}{3}$ cheesy popcorn. How much does the cheesy popcorn weigh?

Spiral Review (6.NS.3, 6.NS.6c)

3. Ramòn bought a dozen ears of corn for $1.80. What was the cost of each ear of corn?

4. A 1.8-ounce jar of cinnamon costs $4.05. What is the cost per ounce?

5. Rose bought $\frac{7}{20}$ kilogram of ginger candy and 0.4 kilogram of cinnamon candy. Which did she buy more of? Explain how you know.

6. Don walked $3\frac{3}{5}$ miles on Friday, 3.7 miles on Saturday, and $3\frac{5}{8}$ miles on Sunday. List the distances from least to greatest.

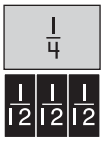
Name _____

Model Fraction Division

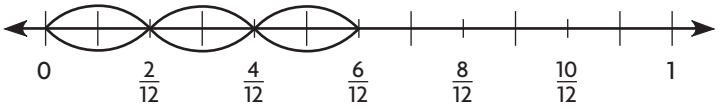
COMMON CORE STANDARD—6.NS.1
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Use the model to find the quotient.

1. $\frac{1}{4} \div 3 = \frac{1}{12}$



2. $\frac{1}{2} \div \frac{2}{12} =$ _____



Use fraction strips to find the quotient.

3. $\frac{5}{6} \div \frac{1}{2}$

_____

4. $\frac{2}{3} \div 4$

_____

5. $\frac{1}{2} \div 6$

_____

6. $\frac{1}{3} \div \frac{1}{12}$

_____

Use a number line to find the quotient.

7. How many $\frac{1}{12}$ pint servings of pecans are in $\frac{5}{6}$ pint of pecans?

_____

8. If Jerry runs $\frac{1}{10}$ mile each day, how many days will it take for him to run $\frac{4}{5}$ mile?

_____

Problem Solving Real World

9. Mrs. Jennings has $\frac{3}{4}$ gallon of paint for an art project. She plans to divide the paint equally into jars. If she puts $\frac{1}{8}$ gallon of paint into each jar, how many jars will she use?

_____

10. If one jar of glue weighs $\frac{1}{12}$ pound, how many jars can Rickie get from $\frac{2}{3}$ pound of glue?

_____

Lesson Check (6.NS.1)

Sketch a model to find the quotient.

1. Darcy needs $\frac{1}{4}$ yard of fabric to make a banner. She has 2 yards of fabric. How many banners can she make?

2. Lorenzo bought $\frac{15}{16}$ pounds of ground beef. He wants to make hamburgers that weigh $\frac{3}{16}$ pound each. How many hamburgers can he make?

Spiral Review (6.NS.2, 6.NS.4)

3. Every night Letisha reads 22 pages. At that rate, how long will it take her to read a book with 300 pages?

4. A principal wants to order enough notebooks for 624 students. The notebooks come in boxes of 28. How many boxes should he order?

5. Each block in Ton's neighborhood is $\frac{3}{8}$ mile long. If he walks $4\frac{1}{2}$ blocks, how far does he walk?

6. In Cathy's garden, $\frac{5}{6}$ of the area is planted with flowers. Of the flowers, $\frac{3}{10}$ of them are red. What fraction of Cathy's garden is planted with red flowers?

Name _____

Estimate Quotients

COMMON CORE STANDARD—6.NS.1
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Estimate using compatible numbers.

1. $12\frac{3}{16} \div 3\frac{9}{10}$

↓ ↓

$12 \div 4 = 3$

2. $15\frac{3}{8} \div \frac{1}{2}$

_____

3. $22\frac{1}{5} \div 1\frac{5}{6}$

_____

4. $7\frac{7}{9} \div \frac{4}{7}$

_____

5. $18\frac{1}{4} \div 2\frac{4}{5}$

_____

6. $62\frac{7}{10} \div 8\frac{8}{9}$

_____

7. $\frac{11}{12} \div \frac{1}{5}$

_____

8. $24\frac{3}{4} \div \frac{1}{2}$

_____

9. $\frac{15}{16} \div \frac{1}{7}$

_____

10. $14\frac{7}{8} \div \frac{5}{11}$

_____

11. $53\frac{7}{12} \div 8\frac{11}{12}$

_____

12. $1\frac{1}{6} \div \frac{1}{9}$

_____

Problem Solving Real World

13. Estimate the number of pieces Sharon will have if she divides $15\frac{1}{3}$ yards of fabric into $4\frac{4}{5}$ yard lengths.

_____

14. Estimate the number of $\frac{1}{2}$ quart containers Ethan can fill from a container with $8\frac{7}{8}$ quarts of water.

_____

Lesson Check (6.NS.1)

1. Each loaf of pumpkin bread calls for $1\frac{3}{4}$ cups of raisins. About how many loaves can be made from 10 cups of raisins?

2. Perry's goal is to run $2\frac{1}{4}$ miles each day. One lap around the school track is $\frac{1}{3}$ mile. About how many laps must he run to reach his goal?

Spiral Review (6.NS.3, 6.NS.4)

3. A recipe calls for $\frac{3}{4}$ teaspoon of red pepper. Uri wants to use $\frac{1}{3}$ of that amount. How much red pepper should he use?

4. A recipe calls for $2\frac{2}{3}$ cups of apple slices. Zoe wants to use $1\frac{1}{2}$ times this amount. How many cups of apples should Zoe use?

5. Edgar has 2.8 meters of rope. If he cuts it into 7 equal parts, how long will each piece be?

6. Kami has 7 liters of water to fill water bottles that each hold 2.8 liters. How many bottles can she fill?

Name _____

Divide Fractions

COMMON CORE STANDARD—6.NS.1
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Estimate. Then write the quotient in simplest form.

1. $5 \div \frac{1}{6}$

Estimate: 30

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

$= \frac{30}{1}$

$= 30$

2. $\frac{1}{2} \div \frac{1}{4}$

3. $\frac{4}{5} \div \frac{2}{3}$

4. $\frac{14}{15} \div 7$

5. $\frac{2}{5} \div \frac{7}{10}$

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

7. $4 \div \frac{4}{5}$

8. $1 \div \frac{3}{4}$

9. $8 \div \frac{1}{3}$

10. $\frac{12}{21} \div \frac{2}{3}$

11. $\frac{5}{6} \div \frac{5}{12}$

12. $\frac{5}{8} \div \frac{1}{2}$

13. Joy ate $\frac{1}{4}$ of a pizza. If she divides the rest of the pizza into pieces equal to $\frac{1}{8}$ pizza for her family, how many pieces will her family get?

14. Hideko has $\frac{3}{5}$ yard of ribbon to tie on balloons for the festival. Each balloon will need $\frac{3}{10}$ yard of ribbon. How many balloons can Hideko tie with ribbon?

Problem Solving Real World

15. Rick knows that 1 cup of glue weighs $\frac{1}{18}$ pound. He has $\frac{2}{3}$ pound of glue. How many cups of glue does he have?

16. Mrs. Jennings had $\frac{5}{7}$ gallon of paint. She gave $\frac{1}{7}$ gallon each to some students. How many students received paint if Mrs. Jennings gave away all the paint?

Lesson Check (6.NS.1)

1. There was $\frac{2}{3}$ of a pizza for 6 friends to share equally. What fraction of the pizza did each person get?

2. Rashad needs $\frac{2}{3}$ pound of wax to make a candle. How many candles can he make with 6 pounds of wax?

Spiral Review (6.NS.1, 6.NS.3, 6.NS.4)

3. Jeremy had $\frac{3}{4}$ of a submarine sandwich and gave his friend $\frac{1}{3}$ of it. What fraction of the sandwich did the friend receive?

4. Ebony walked at a rate of $3\frac{1}{2}$ miles per hour for $1\frac{1}{3}$ hours. How far did she walk?

5. Penny uses $\frac{3}{4}$ yard of fabric for each pillow she makes. How many pillows can she make using 6 yards of fabric?

6. During track practice, Chris ran 2.5 laps in 81 seconds. What was his average time per lap?

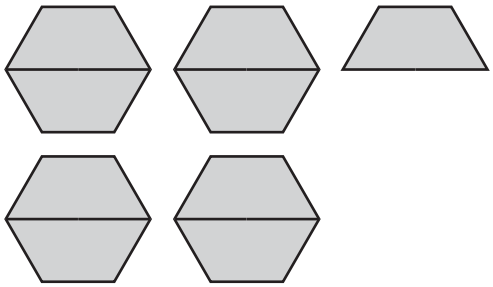
Name _____

Model Mixed Number Division

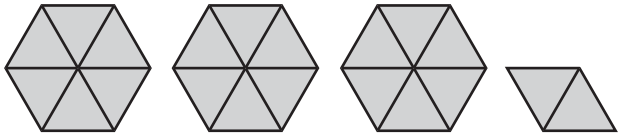
COMMON CORE STANDARD—6.NS.1
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Use the model to find the quotient.

1. $4\frac{1}{2} \div \frac{1}{2} =$ 9

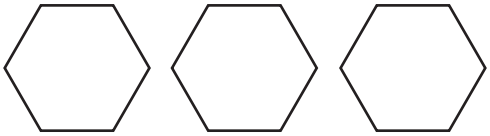


2. $3\frac{1}{3} \div \frac{1}{6} =$ _____

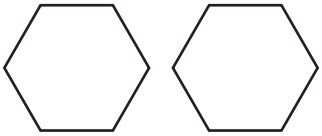


Use pattern blocks to find the quotient. Then draw the model.

3. $2\frac{1}{2} \div \frac{1}{6} =$ _____



4. $1\frac{1}{2} \div \frac{1}{2} =$ _____



Draw a model to solve.

5. $2\frac{3}{4} \div 2 =$ _____

6. $3\frac{1}{3} \div 3 =$ _____

Problem Solving Real World

7. Marty has $2\frac{4}{5}$ quarts of juice. He pours the same amount of juice into 2 bottles. How much does he pour into each bottle?

_____

8. How many $\frac{1}{3}$ pound servings are in $4\frac{2}{3}$ pounds of cheese?

_____

Lesson Check (6.NS.1)

Sketch a model to find the quotient.

1. Emma has $4\frac{1}{2}$ pounds of birdseed. She wants to divide it evenly among 3 bird feeders. How much birdseed should she put in each?

2. A box of crackers weighs $11\frac{1}{4}$ ounces. Kaden estimates that one serving is $\frac{3}{4}$ ounce. How many servings are in the box?

Spiral Review (6.NS, 6.NS.4, 6.NS.6c)

3. The Ecology Club has volunteered to clean up 4.8 kilometers of highway. The members are organized into 16 teams. Each team will clean the same amount of highway. How much highway will each team clean?

4. Tyrone has $8.06. How many bagels can he buy if each bagel costs $0.65?

5. A nail is 0.1875 inches thick. What is its thickness as a fraction?

6. Maria wants to find the product of $5\frac{3}{20} \times 3\frac{4}{25}$ using decimals instead of fractions. How can she rewrite the problem using decimals?

Name _____

Divide Mixed Numbers

COMMON CORE STANDARD—6.NS.1
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Estimate. Then write the quotient in simplest form.

1. $2\frac{1}{2} \div 2\frac{1}{3}$

Estimate: $2 \div 2 = 1$

$$2\frac{1}{2} \div 2\frac{1}{3} = \frac{5}{2} \div \frac{7}{3}$$
$$= \frac{5}{2} \times \frac{3}{7}$$
$$= \frac{15}{15} \text{ or } 1\frac{1}{14}$$

2. $2\frac{2}{3} \div 1\frac{1}{3}$

_____

3. $2 \div 3\frac{5}{8}$

_____

4. $1\frac{13}{15} \div 1\frac{2}{5}$

_____

5. $10 \div 6\frac{2}{3}$

_____

6. $2\frac{3}{5} \div 1\frac{1}{25}$

_____

7. $2\frac{1}{5} \div 2$

_____

8. Sid and Jill hiked $4\frac{1}{8}$ miles in the morning and $1\frac{7}{8}$ miles in the afternoon. How many times as far did they hike in the morning as in the afternoon?

_____

9. Kim has $2\frac{1}{2}$ cups of peaches. How many $\frac{1}{4}$ cup servings can she make?

_____

Problem Solving Real World

10. It takes Nim $2\frac{2}{3}$ hours to weave a basket. He worked Monday through Friday, 8 hours a day. How many baskets did he make?

_____

11. A tree grows $1\frac{3}{4}$ feet per year. How long will it take the tree to grow from a height of $21\frac{1}{4}$ feet to a height of 37 feet?

_____

Lesson Check (6.NS.1)

1. Tom has a can of paint that covers $37\frac{1}{2}$ square meters. Each board on the fence has an area of $\frac{3}{16}$ square meters. How many boards can he paint?

2. A baker wants to put $3\frac{3}{4}$ pounds of apples in each pie she makes. She purchased $52\frac{1}{2}$ pounds of apples. How many pies can she make?

Spiral Review (6.NS.1, 6.NS.3)

3. The three sides of a triangle measure 9.97 meters, 10.1 meters, and 0.53 meter. What is the distance around the triangle?

4. Selena bought 5.62 pounds of meat for $3.49 per pound. What was the total cost of the meat?

5. Melanie prepared $7\frac{1}{2}$ tablespoons of a spice mixture. She uses $\frac{1}{4}$ tablespoon to make a batch of barbecue sauce. Estimate the number of batches of barbecue sauce she can make using the spice mixture.

6. Arturo mixed together 1.24 pounds of pretzels, 0.78 pounds of nuts, 0.3 pounds of candy, and 2 pounds of popcorn. He then packaged it in bags that each contained 0.27 pounds. How many bags could he fill?

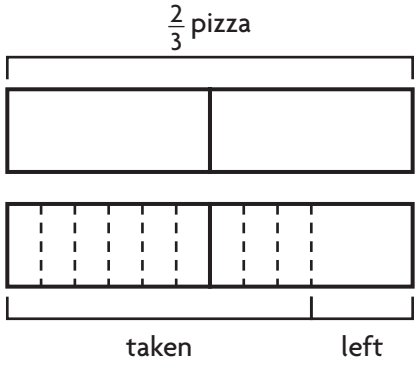
Name _____

Problem Solving • Fraction Operations

COMMON CORE STANDARD—6.NS.1
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Read each problem and solve.

1. $\frac{2}{3}$ of a pizza was left over. A group of friends divided the leftover pizza into pieces each equal to $\frac{1}{18}$ of the original pizza. After each friend took one piece, $\frac{1}{6}$ of the leftover pizza remained. How many friends were in the group?



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2. Sarah's craft project uses pieces of yarn that are $\frac{1}{8}$ yard long. She has a piece of yarn that is 3 yards long. How many $\frac{1}{8}$-yard pieces can she cut and still have $1\frac{1}{4}$ yards left?

3. Alex opens a 1-pint container of orange butter. He spreads $\frac{1}{16}$ of the butter on his bread. Then he divides the rest of the butter into $\frac{3}{4}$-pint containers. How many $\frac{3}{4}$-pint containers is he able to fill?

4. Kaitlin buys $\frac{9}{10}$ pound of orange slices. She eats $\frac{1}{3}$ of them and divides the rest equally into 3 bags. How much is in each bag?

Lesson Check (6.NS.1)

1. Eva wanted to fill bags with $\frac{3}{4}$ pounds of trail mix. She started with $11\frac{3}{8}$ pounds but ate $\frac{1}{8}$ pound before she started filling the bags. How many bags could she fill?

2. John has a roll containing $24\frac{2}{3}$ feet of wrapping paper. He wants to divide it into 11 pieces. First, though, he must cut off $\frac{5}{6}$ foot because it was torn. How long will each piece be?

Spiral Review (6.NS.1, 6.NS.4, 6.NS.6)

3. Alexis has $32\frac{2}{5}$ ounces of beads. How many necklaces can she make if each uses $2\frac{7}{10}$ ounces of beads?

4. Joseph has $32.40. He wants to buy several comic books that each cost $2.70. How many comic books can he buy?

5. A rectangle is $2\frac{4}{5}$ meters wide and $3\frac{1}{2}$ meters long. What is its area?

6. A rectangle is 2.8 meters wide and 3.5 meters long. What is its area?