

Name _____

Greatest Common Factor



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

List the common factors. Circle the greatest common factor.

1. 25 and 10

2. 36 and 90

3. 45 and 60

1, 5

Find the GCF.

4. 14, 18

5. 6, 48

6. 16, 100

Use the GCF and the Distributive Property to express the sum as a product.

7. $20 + 35$

8. $18 + 27$

9. $64 + 40$

Problem Solving



10. Jerome is making prizes for a game at the school fair. He has two bags of different pins, one with 15 square pins and one with 20 round pins. Every prize will have one kind of pin. Each prize will have the same number of pins. What is the greatest number of pins Jerome can put in each prize?

11. There are 24 sixth graders and 40 seventh graders. Mr. Chan wants to divide both grades into groups of equal size, with the greatest possible number of students in each group. How many students should be in each group?

12. **WRITE** *Math* Write a short paragraph to explain how to use prime factorization and the Distributive Property to express the sum of two whole numbers as a product.

Name _____

Multiply Fractions



COMMON CORE STANDARD—6.NS.B.4

Compute fluently with multi-digit numbers and find common factors and multiples.

Find the product. Write it in simplest form.

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

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

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

4. $1\frac{1}{8} \times \frac{1}{9}$

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

$= \frac{7}{10}$

6. 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?

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

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

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

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

11. $6 \times (\frac{4}{5} + \frac{2}{10}) \times \frac{2}{3}$

Problem Solving



12. 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?

13. 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?

14. **WRITE** Math Write and solve a word problem that involves multiplying by a fraction.

Name _____

Divide Fractions



COMMON CORE STANDARD—6.NS.A.1

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

Estimate. Then write the quotient in simplest form.

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

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

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

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

Estimate: 30

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

$= \frac{30}{1}$

$= 30$

5. $8 \div \frac{1}{3}$

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

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

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


9. 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?

10. 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

11. 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?

12. 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?

13. **WRITE**  *Math* Write a word problem that involves two fractions. Include the solution.

Name _____

Simplify Factors**COMMON CORE STANDARD—6.NS.B.4***Compute fluently with multi-digit numbers and find common factors and multiples.***Find the product. Simplify before multiplying.**

1. $\frac{8}{9} \times \frac{5}{12} = \frac{8 \times 5}{9 \times 12}$

$= \frac{10}{27}$

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

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

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

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

Problem Solving

9. 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?

10. 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?

11. **WRITE** *Math* Show two ways to multiply $\frac{2}{15} \times \frac{3}{20}$. Then tell which way is easier and justify your choice.

Name _____

Use Equivalent Ratios



COMMON CORE STANDARD—6.RP.A.3a
Understand ratio concepts and use ratio reasoning to solve problems.

Use equivalent ratios to find the unknown value.

1. $\frac{4}{10} = \frac{\square}{40}$

$$\frac{4 \times 4}{10 \times 4} = \frac{\square}{40}$$

$$\frac{16}{40} = \frac{\square}{40}$$

$$\square = 16$$

2. $\frac{3}{24} = \frac{33}{\square}$

3. $\frac{7}{\square} = \frac{21}{27}$

4. $\frac{\square}{9} = \frac{12}{54}$

5. $\frac{3}{2} = \frac{12}{\square}$

6. $\frac{4}{5} = \frac{\square}{40}$

7. $\frac{\square}{2} = \frac{45}{30}$

8. $\frac{45}{\square} = \frac{5}{6}$

Problem Solving



9. Honeybees produce 7 pounds of honey for every 1 pound of beeswax they produce. Use equivalent ratios to find how many pounds of honey are produced when 25 pounds of beeswax are produced.
-

10. A 3-ounce serving of tuna provides 21 grams of protein. Use equivalent ratios to find how many grams of protein are in 9 ounces of tuna.
-

11. **WRITE** ▶ *Math* Explain how using equivalent ratios is like adding fractions with unlike denominators.
-
-
-
-

Name _____

Write Fractions and Decimals as Percents



COMMON CORE STANDARD—
6.RP.A.3c Understand ratio concepts and use ratio reasoning to solve problems.

Write the fraction or decimal as a percent.

1. $\frac{7}{20}$

2. $\frac{3}{50}$

3. $\frac{1}{25}$

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

$$\frac{7}{20} = \frac{7 \times 5}{20 \times 5}$$

$$= \frac{35}{100} = 35\%$$

5. 0.622

6. 0.303

7. 0.06

8. 2.45

Write the number in two other forms (fraction, decimal, or percent).

Write the fraction in simplest form.

9. $\frac{19}{20}$

10. $\frac{9}{16}$

11. 0.4

12. 0.22

Problem Solving



13. According to the U.S. Census Bureau, $\frac{3}{25}$ of all adults in the United States visited a zoo in 2007. What percent of all adults in the United States visited a zoo in 2007?

14. A bag contains red and blue marbles. Given that $\frac{17}{20}$ of the marbles are red, what percent of the marbles are blue?

15. **WRITE** ▶ *Math* Explain two ways to write $\frac{4}{5}$ as a percent.

Name _____

✓ Mid-Chapter Checkpoint



Vocabulary

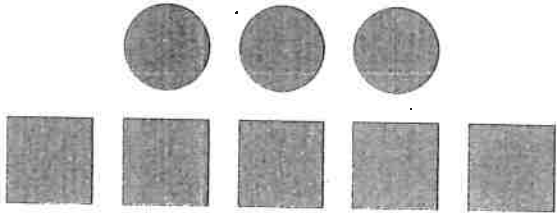
Choose the best term from the box to complete the sentence.

1. A _____ is a rate that makes a comparison to 1 unit. (p. 218)
2. Two ratios that name the same comparison are _____ (p. 223)

Vocabulary
equivalent ratios
rate
ratio
unit rate

Concepts and Skills

3. Write the ratio of red circles to blue squares. (6.RP.A.1)



Write the ratio in two different ways. (6.RP.A.1)

- | | | | |
|---------------------|-----------------|---------------------------|---------------------|
| 4. 8 to 12
_____ | 5. 7:2
_____ | 6. $\frac{5}{9}$
_____ | 7. 11 to 3
_____ |
|---------------------|-----------------|---------------------------|---------------------|

Write two equivalent ratios. (6.RP.A.3a)

- | | | | |
|---------------------------|---------------------------|-----------------------------|-----------------------------|
| 8. $\frac{2}{7}$
_____ | 9. $\frac{6}{5}$
_____ | 10. $\frac{9}{12}$
_____ | 11. $\frac{18}{6}$
_____ |
|---------------------------|---------------------------|-----------------------------|-----------------------------|

Find the unknown value. (6.RP.A.3a)

- | | | | |
|--|---|--|---|
| 12. $\frac{15}{\square} = \frac{5}{10}$
_____ | 13. $\frac{\square}{9} = \frac{12}{3}$
_____ | 14. $\frac{48}{16} = \frac{\square}{8}$
_____ | 15. $\frac{9}{36} = \frac{3}{\square}$
_____ |
|--|---|--|---|