



# Mathematics

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## Grade 5

10-15 minutes  

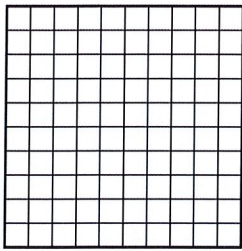
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per day

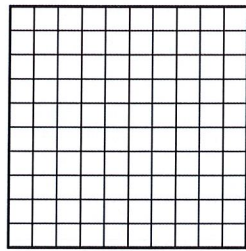
## Understanding of Place Value

Name: \_\_\_\_\_

- 1** The decimal grid in each model represents 1 whole. Shade each model to show the decimal number below the model.



**0.5**



**0.05**

Complete the comparison statements.

0.05 is \_\_\_\_\_ of 0.5.

0.5 is \_\_\_\_\_ times the value of 0.05.

Complete the equations.

$$0.5 \div \underline{\hspace{2cm}} = 0.05$$

$$0.05 \times \underline{\hspace{2cm}} = 0.5$$

- 2** Draw a number line from 0 to 2. Then draw and label points at 2 and 0.2.



Use the number line to explain why 2 is 10 times the value of 0.2.

Complete the equations to show the relationship between 2 and 0.2.

$$0.2 \times \underline{\hspace{2cm}} = 2$$

$$2 \div \underline{\hspace{2cm}} = 0.2$$

- 3** Which type of model do you like best? Explain why.

## Understanding Powers of 10

Name: \_\_\_\_\_

**Multiply or divide.**

**1**  $6 \div 10$   
\_\_\_\_\_

**2**  $0.6 \div 10$   
\_\_\_\_\_

**3**  $6 \div 10^2$   
\_\_\_\_\_

**4**  $0.6 \div 10^2$   
\_\_\_\_\_

**5**  $6 \div 10^3$   
\_\_\_\_\_

**6**  $60 \div 10^3$   
\_\_\_\_\_

**7**  $0.3 \times 10$   
\_\_\_\_\_

**8**  $0.3 \times 10^2$   
\_\_\_\_\_

**9**  $0.3 \times 10^3$   
\_\_\_\_\_

**10**  $0.03 \times 10^2$   
\_\_\_\_\_

**11**  $0.003 \times 10^2$   
\_\_\_\_\_

**12**  $0.03 \times 10^3$   
\_\_\_\_\_

**13**  $72 \div 10$   
\_\_\_\_\_

**14**  $0.72 \times 10^2$   
\_\_\_\_\_

**15**  $7,200 \div 10^3$   
\_\_\_\_\_

**16**  $20 \div 10^2$   
\_\_\_\_\_

**17**  $0.9 \times 10^3$   
\_\_\_\_\_

**18**  $0.001 \times 10^2$   
\_\_\_\_\_

**19**  $54 \div 10$   
\_\_\_\_\_

**20**  $150 \div 10^3$   
\_\_\_\_\_

**21**  $0.46 \times 10^3$   
\_\_\_\_\_

**22** What strategies did you use to solve the problems? Explain.

## Reading a Decimal in Word Form

Name: \_\_\_\_\_

**What is the word form of each decimal?**

**1** 0.2

\_\_\_\_\_

**2** 0.02

\_\_\_\_\_

**3** 0.002

\_\_\_\_\_

**4** 0.12

\_\_\_\_\_

**5** 0.012

\_\_\_\_\_

**6** 0.102

\_\_\_\_\_

**7** 1.002

\_\_\_\_\_

**8** 9.4

\_\_\_\_\_

**9** 90.04

\_\_\_\_\_

**10** 0.94

\_\_\_\_\_

**11** 500.2

\_\_\_\_\_

**12** 8.008

\_\_\_\_\_

**13** 700.06

\_\_\_\_\_

**14** 6.335

\_\_\_\_\_

**15** 3,000.001

\_\_\_\_\_

**16** What strategies did you use to help you read the decimals? Explain.



## Writing a Decimal in Standard Form

Name: \_\_\_\_\_

**What decimal represents each number?**

**1** one and six tenths

\_\_\_\_\_

**2** eight and eleven hundredths

\_\_\_\_\_

**3**  $6 \times 1 + 5 \times \frac{1}{10}$

\_\_\_\_\_

**4** thirteen and thirteen thousandths

\_\_\_\_\_

**5**  $2 \times 10 + 7 \times \frac{1}{10} + 3 \times \frac{1}{100}$

\_\_\_\_\_

**6**  $4 \times 1 + 1 \times \frac{1}{100} + 9 \times \frac{1}{1,000}$

\_\_\_\_\_

**7** five hundred twelve thousandths

\_\_\_\_\_

**8**  $8 \times 100 + 2 \times \frac{1}{10} + 8 \times \frac{1}{1,000}$

\_\_\_\_\_

**9**  $2 \times 1 + 4 \times \frac{1}{100}$

\_\_\_\_\_

**10** forty-two and forty-one hundredths

\_\_\_\_\_

**11**  $7 \times 100 + 2 \times 10 + 3 \times 1 + 6 \times \frac{1}{10}$

\_\_\_\_\_

**12** twelve and sixty-eight thousandths

\_\_\_\_\_

**13**  $3 \times 1,000 + 6 \times 100 + 3 \times 10 + 7 \times \frac{1}{10} + 2 \times \frac{1}{100} + 8 \times \frac{1}{1,000}$

\_\_\_\_\_

**14** nine hundred fifty-six and four hundred twenty-seven thousandths

\_\_\_\_\_

**15** How was writing decimals for numbers in word form different from numbers in expanded form?

## Comparing Decimals

Name: \_\_\_\_\_

Write the symbol  $<$ ,  $=$ , or  $>$  in each comparison statement.

1  $0.02$  \_\_\_\_\_  $0.002$

2  $0.05$  \_\_\_\_\_  $0.5$

3  $0.74$  \_\_\_\_\_  $0.84$

4  $0.74$  \_\_\_\_\_  $0.084$

5  $1.2$  \_\_\_\_\_  $1.25$

6  $5.130$  \_\_\_\_\_  $5.13$

7  $3.201$  \_\_\_\_\_  $3.099$

8  $0.159$  \_\_\_\_\_  $1.590$

9  $8.269$  \_\_\_\_\_  $8.268$

10  $4.60$  \_\_\_\_\_  $4.060$

11  $302.026$  \_\_\_\_\_  $300.226$

12  $0.237$  \_\_\_\_\_  $0.223$

13  $3.033$  \_\_\_\_\_  $3.303$

14  $9.074$  \_\_\_\_\_  $9.47$

15  $6.129$  \_\_\_\_\_  $6.19$

16  $567.45$  \_\_\_\_\_  $564.75$

17  $78.967$  \_\_\_\_\_  $78.957$

18  $5.346$  \_\_\_\_\_  $5.4$

19  $12.112$  \_\_\_\_\_  $12.121$

20  $26.2$  \_\_\_\_\_  $26.200$

21  $100.32$  \_\_\_\_\_  $100.232$

22 What strategies did you use to solve the problems? Explain.

## Rounding Decimals

Name: \_\_\_\_\_

**Round each decimal to the nearest tenth.**

**1** 0.32  
\_\_\_\_\_

**2** 3.87  
\_\_\_\_\_

**3** 0.709  
\_\_\_\_\_

**4** 12.75  
\_\_\_\_\_

**5** 12.745  
\_\_\_\_\_

**6** 645.059  
\_\_\_\_\_

**Round each decimal to the nearest hundredth.**

**7** 1.079  
\_\_\_\_\_

**8** 0.854  
\_\_\_\_\_

**9** 0.709  
\_\_\_\_\_

**10** 12.745  
\_\_\_\_\_

**11** 645.059  
\_\_\_\_\_

**12** 50.501  
\_\_\_\_\_

**Round each decimal to the nearest whole number.**

**13** 1.47  
\_\_\_\_\_

**14** 12.5  
\_\_\_\_\_

**15** 200.051  
\_\_\_\_\_

**16** Write two different decimals that are the same value when rounded to the nearest tenth. Explain why the rounded values are the same.

**17** Round 1.299 to the nearest tenth and to the nearest hundredth. Explain why the rounded values are equivalent.

## Multiplying Multi-Digit Whole Numbers

Name: \_\_\_\_\_

**Estimate. Circle all the problems with products between 3,000 and 9,000.  
Then find the exact products of only the problems you circled.**

**1**     132  
× 34  
\_\_\_\_\_

**2**     247  
× 15  
\_\_\_\_\_

**3**     145  
× 23  
\_\_\_\_\_

**4**     308  
× 12  
\_\_\_\_\_

**5**     158  
× 41  
\_\_\_\_\_

**6**     364  
× 32  
\_\_\_\_\_

**7**     400  
× 29  
\_\_\_\_\_

**8**     254  
× 17  
\_\_\_\_\_

**9**     187  
× 42  
\_\_\_\_\_

**10**    216  
× 12  
\_\_\_\_\_

**11**    323  
× 18  
\_\_\_\_\_

**12**    194  
× 26  
\_\_\_\_\_

**13**    317  
× 14  
\_\_\_\_\_

**14**    385  
× 31  
\_\_\_\_\_

**15**    285  
× 27  
\_\_\_\_\_

**16** What strategies did you use to solve the problems? Explain.

## Multiplying with the Standard Algorithm

Name: \_\_\_\_\_

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

$$\begin{array}{r} 1 \quad 580 \\ \times 30 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \quad 3,104 \\ \times 18 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 1,482 \\ \times 38 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \quad 1,085 \\ \times 17 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 1,236 \\ \times 55 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \quad 1,625 \\ \times 18 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \quad 2,105 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \quad 1,788 \\ \times 15 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \quad 2,500 \\ \times 19 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \quad 648 \\ \times 32 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \quad 2,409 \\ \times 23 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \quad 306 \\ \times 62 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \quad 2,417 \\ \times 24 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \quad 650 \\ \times 35 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \quad 962 \\ \times 44 \\ \hline \end{array}$$

### Answers

20,736	17,400	27,365	47,500	55,872
18,972	18,445	26,820	67,980	56,316
22,750	29,250	55,407	42,328	58,008



## Using Estimation and Area Models to Divide

Name: \_\_\_\_\_

**Check each answer by multiplying the divisor by the quotient. If the answer is incorrect, cross out the answer and write the correct answer.**

Division Problems	Student Answers
$516 \div 12$	<del>48</del> 43 Check: $12 \times 48 = 576$
$837 \div 31$	27
$351 \div 13$	57
$918 \div 54$	22
$896 \div 32$	23
$1,482 \div 78$	14
$1,012 \div 11$	82
$1,344 \div 56$	24

- 1** Explain how you could know that the answers to two of the problems are incorrect without multiplying.



## Using Area Models and Partial Quotients to Divide

Name: \_\_\_\_\_

**Estimate. Circle all the problems that will have quotients greater than 30. Then find the exact quotients of only the problems you circled.**

**1**  $540 \div 12$

\_\_\_\_\_

**2**  $798 \div 38$

\_\_\_\_\_

**3**  $429 \div 11$

\_\_\_\_\_

**4**  $931 \div 19$

\_\_\_\_\_

**5**  $925 \div 25$

\_\_\_\_\_

**6**  $390 \div 15$

\_\_\_\_\_

**7**  $1,071 \div 51$

\_\_\_\_\_

**8**  $1,326 \div 13$

\_\_\_\_\_

**9**  $1,856 \div 32$

\_\_\_\_\_

**10**  $2,952 \div 72$

\_\_\_\_\_

**11**  $1,869 \div 89$

\_\_\_\_\_

**12**  $1,798 \div 29$

\_\_\_\_\_

- 13** Select a problem you did not circle. Describe two different ways you could use estimation to tell the quotient is not greater than 30.

## Adding Decimals

Name: \_\_\_\_\_

**Circle all the problems with sums less than 5.  
Then find the exact sums of only the problems you circled.**

**1**  $0.24 + 4.25$   
\_\_\_\_\_

**2**  $4.8 + 0.16$   
\_\_\_\_\_

**3**  $2.31 + 2.075$   
\_\_\_\_\_

**4**  $2.31 + 2.7$   
\_\_\_\_\_

**5**  $0.909 + 4.09$   
\_\_\_\_\_

**6**  $3.99 + 1.109$   
\_\_\_\_\_

**7**  $2.675 + 2.325$   
\_\_\_\_\_

**8**  $3.775 + 0.225$   
\_\_\_\_\_

**9**  $2.06 + 2.933$   
\_\_\_\_\_

**10**  $2.6 + 2.933$   
\_\_\_\_\_

**11**  $1.809 + 3.091$   
\_\_\_\_\_

**12**  $3.01 + 1.991$   
\_\_\_\_\_

**13**  $1.83 + 3.1 + 0.1$   
\_\_\_\_\_

**14**  $0.012 + 3.79 + 1.101$   
\_\_\_\_\_

**15**  $2.6 + 2.04 + 0.099$   
\_\_\_\_\_

**16** What strategies did you use to solve the problems?

## Subtracting Decimals to Hundredths

Name: \_\_\_\_\_

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

**1**  $7.5 - 1.2$

\_\_\_\_\_

**2**  $10.75 - 4.13$

\_\_\_\_\_

**3**  $20.2 - 14.8$

\_\_\_\_\_

**4**  $6.12 - 0.7$

\_\_\_\_\_

**5**  $41.5 - 33.25$

\_\_\_\_\_

**6**  $15.9 - 8.92$

\_\_\_\_\_

**7**  $105.53 - 99.28$

\_\_\_\_\_

**8**  $9.46 - 3.68$

\_\_\_\_\_

**9**  $74 - 65.9$

\_\_\_\_\_

**10**  $5.05 - 0.56$

\_\_\_\_\_

**11**  $31.27 - 23.67$

\_\_\_\_\_

**12**  $256.4 - 248.38$

\_\_\_\_\_

**13**  $12 - 4.39$

\_\_\_\_\_

**14**  $1,280.01 - 1,272.77$

\_\_\_\_\_

**15**  $500.2 - 494.94$

\_\_\_\_\_

### Answers

6.25

5.26

6.62

8.1

7.6

4.49

8.25

7.61

6.98

5.42

7.24

5.4

8.02

5.78

6.3



- 4** Kyle wants to buy a hat for \$5.75, a T-shirt for \$7.65, and a keychain for \$3.15. He has \$16. Does he have enough money? Use estimation only to decide. Explain why you are confident in your estimate.
- 5** For his hiking club, Ricardo is making a container of trail mix with 3.5 kilograms of nuts. He has 1.78 kilograms of peanuts and 0.625 kilograms of almonds. The rest of the nuts will be cashews. How many kilograms of cashews does he need? Use estimation to check your answer for reasonableness.
- 6** Suppose you want to be sure that the total cost of three items does not go over a certain amount. How can you use estimation only to solve the problem?



## Multiplying a Decimal by a Whole Number

Name: \_\_\_\_\_

**Multiply.**

**1**  $3 \times 0.2$

\_\_\_\_\_

**2**  $3 \times 0.03$

\_\_\_\_\_

**3**  $3 \times 0.23$

\_\_\_\_\_

**4**  $4 \times 0.08$

\_\_\_\_\_

**5**  $4 \times 1.1$

\_\_\_\_\_

**6**  $4 \times 1.18$

\_\_\_\_\_

**7**  $6 \times 0.07$

\_\_\_\_\_

**8**  $6 \times 1.1$

\_\_\_\_\_

**9**  $6 \times 1.17$

\_\_\_\_\_

**10**  $21 \times 0.05$

\_\_\_\_\_

**11**  $21 \times 1.05$

\_\_\_\_\_

**12**  $21 \times 2.05$

\_\_\_\_\_

**13**  $9 \times 3.25$

\_\_\_\_\_

**14**  $5 \times 0.87$

\_\_\_\_\_

**15**  $11 \times 3.68$

\_\_\_\_\_

**16**  $16 \times 6.4$

\_\_\_\_\_

**17**  $7 \times 6.89$

\_\_\_\_\_

**18**  $32 \times 5.12$

\_\_\_\_\_

**19** How did you know where to put the decimal point in problem 6?



## Multiplying Decimals Less Than 1

Name: \_\_\_\_\_

**Multiply.**

**1**  $0.5 \times 3$

\_\_\_\_\_

**2**  $0.5 \times 0.3$

\_\_\_\_\_

**3**  $0.5 \times 0.03$

\_\_\_\_\_

**4**  $6 \times 0.2$

\_\_\_\_\_

**5**  $0.6 \times 0.2$

\_\_\_\_\_

**6**  $0.06 \times 0.2$

\_\_\_\_\_

**7**  $0.8 \times 0.1$

\_\_\_\_\_

**8**  $0.8 \times 0.2$

\_\_\_\_\_

**9**  $0.8 \times 0.3$

\_\_\_\_\_

**10**  $0.4 \times 0.02$

\_\_\_\_\_

**11**  $0.4 \times 0.04$

\_\_\_\_\_

**12**  $0.4 \times 0.12$

\_\_\_\_\_

**13**  $0.3 \times 0.4$

\_\_\_\_\_

**14**  $0.6 \times 0.4$

\_\_\_\_\_

**15**  $0.6 \times 0.8$

\_\_\_\_\_

**16**  $0.01 \times 0.5$

\_\_\_\_\_

**17**  $0.05 \times 0.5$

\_\_\_\_\_

**18**  $0.25 \times 0.5$

\_\_\_\_\_

**19** Describe a pattern you noticed when you were completing the problem set.

## Multiplying with Decimals Greater Than 1

Name: \_\_\_\_\_

The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

**1**  $0.3 \times 1.2$

\_\_\_\_\_

**2**  $1.2 \times 0.4$

\_\_\_\_\_

**3**  $1.2 \times 1.1$

\_\_\_\_\_

**4**  $0.3 \times 12.1$

\_\_\_\_\_

**5**  $4.4 \times 1.1$

\_\_\_\_\_

**6**  $0.02 \times 1.8$

\_\_\_\_\_

**7**  $7.1 \times 5.1$

\_\_\_\_\_

**8**  $6.6 \times 0.02$

\_\_\_\_\_

**9**  $2.4 \times 4.8$

\_\_\_\_\_

**10**  $9.2 \times 5.24$

\_\_\_\_\_

**11**  $1.2 \times 1.24$

\_\_\_\_\_

**12**  $8.4 \times 6.2$

\_\_\_\_\_

**13**  $4.2 \times 3.21$

\_\_\_\_\_

**14**  $4.25 \times 8.5$

\_\_\_\_\_

**15**  $1.9 \times 2.78$

\_\_\_\_\_

### Answers

0.132

1.32

13.482

1.488

48.208

4.84

0.48

52.08

11.52

5.282

36.125

0.036

0.36

3.63

36.21

## Dividing a Decimal by a Whole Number

Name: \_\_\_\_\_

**Multiply to check if the student's answer is reasonable. If not, cross out the answer and write the correct quotient.**

Division Problems	Student Answers
$0.88 \div 11$	<del>0.8</del> 0.08      Product: $11 \times 0.8 = 8.8$
$5.6 \div 8$	0.07
$7.2 \div 9$	0.8
$25.35 \div 5$	5.7
$21.7 \div 7$	3.1
$14.4 \div 12$	0.12
$96.16 \div 8$	12.2
$60.18 \div 2$	30.9

**1** Can an answer be incorrect even if it looks reasonable? Explain.

## Dividing by Hundredths

Name: \_\_\_\_\_

**Divide.**

**1**  $1 \div 0.25$

\_\_\_\_\_

**2**  $4 \div 0.25$

\_\_\_\_\_

**3**  $3.75 \div 0.25$

\_\_\_\_\_

**4**  $6.5 \div 0.25$

\_\_\_\_\_

**5**  $1.8 \div 9$

\_\_\_\_\_

**6**  $1.8 \div 0.9$

\_\_\_\_\_

**7**  $1.8 \div 0.09$

\_\_\_\_\_

**8**  $225 \div 75$

\_\_\_\_\_

**9**  $22.5 \div 7.5$

\_\_\_\_\_

**10**  $2.25 \div 0.75$

\_\_\_\_\_

**11**  $0.36 \div 0.06$

\_\_\_\_\_

**12**  $6.36 \div 0.06$

\_\_\_\_\_

**13**  $36.36 \div 0.06$

\_\_\_\_\_

**14**  $9 \div 2.25$

\_\_\_\_\_

**15**  $13.5 \div 2.25$

\_\_\_\_\_

**16** Describe a pattern you noticed when you were completing the problem set.

## Adding Fractions with Unlike Denominators

Name: \_\_\_\_\_

**Add.**

**1**  $\frac{1}{2} + \frac{1}{4}$

\_\_\_\_\_

**2**  $\frac{1}{2} + \frac{3}{8}$

\_\_\_\_\_

**3**  $\frac{1}{2} + \frac{1}{3}$

\_\_\_\_\_

**4**  $\frac{1}{3} + \frac{1}{4}$

\_\_\_\_\_

**5**  $\frac{5}{6} + \frac{1}{12}$

\_\_\_\_\_

**6**  $\frac{1}{3} + \frac{2}{5}$

\_\_\_\_\_

**7**  $\frac{5}{6} + \frac{2}{3}$

\_\_\_\_\_

**8**  $\frac{3}{4} + \frac{5}{6}$

\_\_\_\_\_

**9**  $\frac{7}{9} + \frac{1}{6}$

\_\_\_\_\_

**10**  $\frac{7}{8} + \frac{2}{3}$

\_\_\_\_\_

**11**  $\frac{3}{2} + \frac{3}{5}$

\_\_\_\_\_

**12**  $\frac{9}{8} + \frac{5}{6}$

\_\_\_\_\_

- 13** What is a different common denominator you could use in problem 2? Describe how you would add the fractions using this different common denominator. Is the result equivalent to the sum found in problem 2?

## Adding with Mixed Numbers

Name: \_\_\_\_\_

**Add.**

**1**  $4\frac{7}{8} + \frac{1}{8}$

\_\_\_\_\_

**2**  $4\frac{7}{8} + \frac{1}{4}$

\_\_\_\_\_

**3**  $4\frac{7}{8} + \frac{1}{2}$

\_\_\_\_\_

**4**  $2\frac{3}{4} + \frac{1}{3}$

\_\_\_\_\_

**5**  $2\frac{3}{4} + \frac{2}{3}$

\_\_\_\_\_

**6**  $2\frac{3}{4} + \frac{5}{6}$

\_\_\_\_\_

**7**  $1\frac{2}{5} + 1\frac{1}{2}$

\_\_\_\_\_

**8**  $2\frac{4}{5} + 3\frac{1}{2}$

\_\_\_\_\_

**9**  $3\frac{2}{3} + 3\frac{2}{5}$

\_\_\_\_\_

**10**  $4\frac{5}{8} + 2\frac{2}{3}$

\_\_\_\_\_

**11**  $5\frac{3}{4} + 2\frac{3}{5}$

\_\_\_\_\_

**12**  $3\frac{5}{6} + 2\frac{7}{8}$

\_\_\_\_\_

**13** What strategy did you use to solve problem 3? Describe each step.



## Subtracting Fractions with Unlike Denominators

Name: \_\_\_\_\_

**Subtract.**

**1**  $\frac{1}{2} - \frac{1}{4}$

\_\_\_\_\_

**2**  $\frac{1}{2} - \frac{3}{8}$

\_\_\_\_\_

**3**  $\frac{1}{2} - \frac{1}{3}$

\_\_\_\_\_

**4**  $\frac{1}{3} - \frac{1}{4}$

\_\_\_\_\_

**5**  $\frac{5}{6} - \frac{5}{12}$

\_\_\_\_\_

**6**  $\frac{3}{4} - \frac{1}{6}$

\_\_\_\_\_

**7**  $\frac{7}{8} - \frac{3}{4}$

\_\_\_\_\_

**8**  $\frac{1}{2} - \frac{2}{5}$

\_\_\_\_\_

**9**  $\frac{3}{4} - \frac{3}{5}$

\_\_\_\_\_

**10**  $\frac{2}{3} - \frac{3}{5}$

\_\_\_\_\_

**11**  $\frac{5}{6} - \frac{3}{8}$

\_\_\_\_\_

**12**  $\frac{7}{8} - \frac{2}{3}$

\_\_\_\_\_

**13** How could you check your work in problem 4? Describe each step.

## Subtracting with Mixed Numbers

Name: \_\_\_\_\_

**Subtract.**

**1**  $2\frac{1}{8} - \frac{1}{4}$

\_\_\_\_\_

**2**  $2\frac{1}{8} - \frac{1}{2}$

\_\_\_\_\_

**3**  $2\frac{1}{8} - \frac{3}{4}$

\_\_\_\_\_

**4**  $2\frac{1}{2} - \frac{2}{3}$

\_\_\_\_\_

**5**  $2\frac{1}{4} - 1\frac{1}{3}$

\_\_\_\_\_

**6**  $3\frac{1}{6} - 1\frac{3}{4}$

\_\_\_\_\_

**7**  $7\frac{2}{5} - 3\frac{1}{2}$

\_\_\_\_\_

**8**  $5\frac{3}{8} - 4\frac{1}{6}$

\_\_\_\_\_

**9**  $8\frac{2}{3} - 3\frac{4}{5}$

\_\_\_\_\_

**10**  $6\frac{2}{5} - 3\frac{3}{4}$

\_\_\_\_\_

**11**  $9\frac{3}{8} - 3\frac{2}{3}$

\_\_\_\_\_

**12**  $14\frac{1}{8} - 9\frac{5}{6}$

\_\_\_\_\_

**13** What pattern did you notice in problems 1 through 3? Explain how this helped you subtract.

## Estimating in Word Problems with Fractions

Name: \_\_\_\_\_

**Solve the problems. Estimate to tell if your solution is reasonable. Show your work.**

- 1 Jim mails one package that weighs  $\frac{3}{8}$  pound and another that weighs  $\frac{2}{3}$  pound. What is the total weight of both packages?
- 2 Rosa needs  $5\frac{1}{4}$  yards of ribbon for a crafts project. She already has  $2\frac{7}{8}$  yards of ribbon. How many more yards of ribbon does she need to buy?
- 3 To make fruit punch, Tyrone needs  $3\frac{3}{8}$  quarts of orange juice and  $3\frac{3}{4}$  quarts of cranberry juice. How many quarts of juice does he need in all?

## Estimating in Word Problems with Fractions *continued*

Name: \_\_\_\_\_

- 4 Lin spent  $\frac{5}{6}$  hour on math homework and  $1\frac{3}{4}$  hours on science homework. How many hours in all did she spend on homework for both subjects?
- 5 Sandra rode her bike  $9\frac{1}{3}$  miles on Monday and  $6\frac{4}{5}$  miles on Tuesday. How many more miles did she ride on Monday than on Tuesday?
- 6 How can you make a high estimate for the sum of two fractions in a word problem?

**Solve each problem.**

- 1** Roger has 4 gallons of orange juice. He puts the same amount of juice into each of 5 pitchers. How many gallons of orange juice are in 1 pitcher?
- 2** Marta has 8 cubic feet of potting soil and 3 flower pots. She wants to put the same amount of soil in each pot. How many cubic feet of soil will she put in each flower pot?
- 3** Greg made 27 ounces of potato salad to serve to 10 guests at a picnic. If each serving is the same size, how much potato salad will each guest receive?
- 4** Chandra spends 15 minutes doing 4 math problems. She spends the same amount of time on each problem. How many minutes does she spend on each problem?
- 5** Taylor has 5 yards of gold ribbon to decorate 8 costumes for the school play. She plans to use the same amount of ribbon for each costume. How many yards of ribbon will she use for each costume?
- 6** DeShawn is using 7 yards of wire fencing to make a play area for his puppy. He wants to cut the fencing into 6 pieces of equal length. How long will each piece of fencing be?
- 7** What is a division word problem that can be represented by  $\frac{4}{3}$ ?

## Understanding of Multiplying by a Fraction

Name: \_\_\_\_\_

- 1** Draw a number line model to represent each multiplication problem. Then solve the problem.

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

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



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

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



- 2** Draw an area model to represent each multiplication problem. Then solve the problem.

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

$$\frac{4}{5} \times \frac{2}{3} =$$

$$\frac{3}{4} \times \frac{1}{6}$$

$$\frac{3}{4} \times \frac{1}{6} =$$

- 3** What type of model do you like best? Explain why.



## Multiplying Unit Fractions to Find Area

Name: \_\_\_\_\_

Each multiplication problem is used to find the area of a rectangle. Write the missing digits in the boxes to make each multiplication problem true.

1 length:  $\frac{1}{2}$  unit

width:  $\frac{1}{8}$  unit

$$\frac{1}{2} \times \frac{1}{8} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ square unit}$$

2 length:  $\frac{1}{3}$  unit

width:  $\frac{1}{4}$  unit

$$\frac{1}{3} \times \frac{1}{4} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ square unit}$$

3 length:  $\frac{1}{2}$  unit

width:  $\frac{1}{3}$  unit

$$\frac{1}{2} \times \frac{1}{3} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ square unit}$$

4 length:  $\frac{1}{2}$  unit

width:  $\frac{1}{5}$  unit

$$\frac{1}{2} \times \frac{1}{5} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ square unit}$$

5 length:  $\frac{1}{4}$  unit

width:  $\frac{1}{4}$  unit

$$\frac{1}{4} \times \frac{1}{4} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

6 length:  $\frac{1}{3}$  unit

width:  $\frac{1}{8}$  unit

$$\frac{1}{3} \times \frac{1}{8} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

7 length:  $\frac{1}{2}$  unit

width:  $\frac{1}{7}$  unit

$$\frac{1}{2} \times \frac{1}{7} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

8 length:  $\frac{1}{3}$  unit

width:  $\frac{1}{10}$  unit

$$\frac{1}{3} \times \frac{1}{10} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ square unit}$$

9 length:  $\frac{1}{5}$  unit

width:  $\frac{1}{6}$  unit

$$\frac{1}{6} \times \frac{1}{5} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ square unit}$$

- 10 Write missing digits in the boxes to make two different multiplication problems that are both true.

$$\frac{1}{\boxed{\phantom{00}}} \times \frac{1}{4} = \frac{1}{\boxed{\phantom{00}}}$$

$$\frac{1}{\boxed{\phantom{00}}} \times \frac{1}{4} = \frac{1}{\boxed{\phantom{00}}}$$

## Tiling a Rectangle to Find Area

Name: \_\_\_\_\_

**Each multiplication problem is used to find the area of a rectangle. Write each product.**

- 1** length:  $\frac{1}{2}$  unit  
width:  $\frac{1}{3}$  unit

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

\_\_\_\_\_ square unit

- 2** length:  $\frac{2}{3}$  unit  
width:  $\frac{1}{2}$  unit

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

\_\_\_\_\_ square unit

- 3** length:  $\frac{3}{2}$  unit  
width:  $\frac{2}{3}$  unit

$$\frac{3}{2} \times \frac{2}{3}$$

\_\_\_\_\_ square unit

- 4** length:  $\frac{1}{3}$  unit  
width:  $\frac{1}{4}$  unit

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

\_\_\_\_\_ square unit

- 5** length:  $\frac{3}{4}$  unit  
width:  $\frac{1}{3}$  unit

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

\_\_\_\_\_ square unit

- 6** length:  $\frac{5}{3}$  unit  
width:  $\frac{3}{4}$  unit

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

\_\_\_\_\_ square unit

- 7** length:  $\frac{3}{5}$  unit  
width:  $\frac{1}{2}$  unit

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

\_\_\_\_\_ square unit

- 8** length:  $\frac{3}{2}$  unit  
width:  $\frac{3}{5}$  unit

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

\_\_\_\_\_ square unit

- 9** length:  $\frac{3}{2}$  unit  
width:  $\frac{6}{5}$  unit

$$\frac{3}{2} \times \frac{6}{5}$$

\_\_\_\_\_ square unit

- 10** Describe how you could modify one tiling diagram to solve problems 1 through 3.