



# Summer Math Packet

Scholars Entering Grade 5

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

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# Understanding of Place Value

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

## Set A

- 1** Write the number 78,215 in the place-value chart.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

Write 78,215 in expanded form and word form.

- 2** Write the number 540,632 in the place-value chart.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

Write 540,632 in expanded form and word form.

## Set B

- 3** Show different ways to make 25,302.

\_\_\_\_\_ thousands + \_\_\_\_\_ hundreds + \_\_\_\_\_ ones

\_\_\_\_\_ hundreds + \_\_\_\_\_ ones

\_\_\_\_\_ ones

- 4** Show different ways to make 708,496.

\_\_\_\_\_ hundred thousands + \_\_\_\_\_ thousands + \_\_\_\_\_ hundreds +  
\_\_\_\_\_ tens + \_\_\_\_\_ ones

\_\_\_\_\_ thousands + \_\_\_\_\_ hundreds + \_\_\_\_\_ tens + \_\_\_\_\_ ones

\_\_\_\_\_ hundreds + \_\_\_\_\_ tens + \_\_\_\_\_ ones

## Set B *continued*

**5** Show different ways to make 492,623.

\_\_\_\_\_ ten thousands + \_\_\_\_\_ thousands + \_\_\_\_\_ hundreds +  
\_\_\_\_\_ tens + \_\_\_\_\_ ones

\_\_\_\_\_ thousands + \_\_\_\_\_ tens + \_\_\_\_\_ ones

\_\_\_\_\_ hundreds + \_\_\_\_\_ ones

**6** Write 841,620 in three different ways.

**7** Why do both of these show 27,974?

$20,000 + 7,000 + 900 + 70 + 4$

$27 \text{ thousands} + 97 \text{ tens} + 4 \text{ ones}$

# Comparing Multi-Digit Numbers

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

## Set A

Write the symbol that makes each statement true. Use  $>$ ,  $<$ , or  $=$ .

**1** 23,230 \_\_\_\_\_ 2,323      **2** 33,003 \_\_\_\_\_ 33,030      **3** 9,999 \_\_\_\_\_ 10,000

**4** 40,404 \_\_\_\_\_ 40,040      **5** 52,177 \_\_\_\_\_ 52,771      **6** 421,073 \_\_\_\_\_ 412,730

## Set B

**7** Circle all the numbers that are less than 78,265.

78,000      79,000      70,000      80,000      78,200      78,300

**8** Circle all the numbers that are less than 45,763.

46,000      40,000      50,000      45,700      45,800      45,000

**9** Circle all the numbers that are greater than 108,427.

108,000      108,400      108,500      109,000      108,430      108,420

**10** How did you solve problem 7?

# Rounding Whole Numbers

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

**Round each number to the nearest ten.**

**1** 72

\_\_\_\_\_

**2** 172

\_\_\_\_\_

**3** 2,572

\_\_\_\_\_

**4** 101,372

\_\_\_\_\_

**Round each number to the nearest hundred.**

**5** 180

\_\_\_\_\_

**6** 1,180

\_\_\_\_\_

**7** 56,180

\_\_\_\_\_

**8** 980

\_\_\_\_\_

**9** 1,980

\_\_\_\_\_

**10** 56,980

\_\_\_\_\_

**Round each number to the nearest thousand.**

**11** 7,750

\_\_\_\_\_

**12** 17,750

\_\_\_\_\_

**13** 25,750

\_\_\_\_\_

**14** 70,750

\_\_\_\_\_

**Round each number to the nearest ten thousand.**

**15** 65,321

\_\_\_\_\_

**16** 165,321

\_\_\_\_\_

**17** 185,321

\_\_\_\_\_

**18** 205,321

\_\_\_\_\_

**19** Round 307,451 to each place value given below.

to the nearest thousand: \_\_\_\_\_

to the nearest hundred: \_\_\_\_\_

to the nearest ten: \_\_\_\_\_

## Using Strategies to Add

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

**Add using different strategies.**

$$\begin{array}{r} \mathbf{1} \quad 4,000 \\ + 6,215 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{2} \quad 4,010 \\ + 6,215 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{3} \quad 4,121 \\ + 6,215 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{4} \quad 3,000 \\ + 6,871 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{5} \quad 2,999 \\ + 6,871 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{6} \quad 2,990 \\ + 6,871 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{7} \quad 5,020 \\ + 1,491 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{8} \quad 4,990 \\ + 1,491 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{9} \quad 4,950 \\ + 1,491 \\ \hline \end{array}$$

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

**11** Check your answer to problem 6 by solving it with a different strategy. Show your work.

# Using the Standard Algorithm to Add Greater Numbers

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

**Estimate the sum of each addition problem to check if the student's answer is reasonable. If not, cross out the answer and write the correct answer.**

Addition Problems	Student Answers
$\begin{array}{r} 8,997 \\ + 2,301 \\ \hline \end{array}$	$\begin{array}{r} \del{31,998} \\ 11,298 \end{array}$ <div style="display: inline-block; vertical-align: middle; margin-left: 20px;">           Estimate: <math display="block">\begin{array}{r} 9,000 \\ + 2,000 \\ \hline 11,000 \end{array}</math> </div>
$\begin{array}{r} 23,411 \\ + 35,507 \\ \hline \end{array}$	$12,918$
$\begin{array}{r} 72,418 \\ + 41,291 \\ \hline \end{array}$	$113,709$
$\begin{array}{r} 67,802 \\ + 3,443 \\ \hline \end{array}$	$10,225$
$\begin{array}{r} 5,188 \\ + 9,024 \\ \hline \end{array}$	$6,112$



## Using the Standard Algorithm to Add Greater Numbers *continued*

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

### Addition Problems

$$\begin{array}{r} 21,822 \\ + 75,333 \\ \hline \end{array}$$

$$\begin{array}{r} 60,125 \\ + 69,205 \\ \hline \end{array}$$

$$\begin{array}{r} 4,899 \\ 5,224 \\ + 9,296 \\ \hline \end{array}$$

### Student Answers

97,155

75,330

108,209

**1** How does estimating an addition problem help you know if an answer is reasonable?

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

## Using Strategies to Subtract

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

### Subtract.

$$\begin{array}{r} \mathbf{1} \quad 4,003 \\ - \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4,003 \\ - \quad 13 \\ \hline \end{array}$$

$$\begin{array}{r} 4,003 \\ - \quad 103 \\ \hline \end{array}$$

$$\begin{array}{r} 4,003 \\ - 1,103 \\ \hline \end{array}$$

$$\begin{array}{r} 4,003 \\ - 2,103 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{2} \quad 2,000 \\ - 1,999 \\ \hline \end{array}$$

$$\begin{array}{r} 2,000 \\ - 1,990 \\ \hline \end{array}$$

$$\begin{array}{r} 2,000 \\ - 1,985 \\ \hline \end{array}$$

$$\begin{array}{r} 2,000 \\ - 1,500 \\ \hline \end{array}$$

$$\begin{array}{r} 2,000 \\ - 1,490 \\ \hline \end{array}$$

$$\begin{array}{r} \mathbf{3} \quad 3,007 \\ - \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 3,007 \\ - \quad 27 \\ \hline \end{array}$$

$$\begin{array}{r} 3,007 \\ - \quad 307 \\ \hline \end{array}$$

$$\begin{array}{r} 3,007 \\ - 1,307 \\ \hline \end{array}$$

$$\begin{array}{r} 3,007 \\ - 2,307 \\ \hline \end{array}$$

**4** What strategy did you use to find the differences for problem 2? Explain.

**5** How could you check your answer to one of the problems using another strategy?

## Using the Standard Algorithm to Subtract Greater Numbers

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

**Estimate. Circle all the problems with differences between 30,000 and 60,000. Then find the differences of only the circled problems.**

**1** 
$$\begin{array}{r} 95,217 \\ - 39,871 \\ \hline \end{array}$$

**2** 
$$\begin{array}{r} 62,554 \\ - 31,618 \\ \hline \end{array}$$

**3** 
$$\begin{array}{r} 92,023 \\ - 71,578 \\ \hline \end{array}$$

**4** 
$$\begin{array}{r} 84,724 \\ - 43,951 \\ \hline \end{array}$$

**5** 
$$\begin{array}{r} 56,417 \\ - 24,009 \\ \hline \end{array}$$

**6** 
$$\begin{array}{r} 71,677 \\ - 13,197 \\ \hline \end{array}$$

**7** 
$$\begin{array}{r} 99,902 \\ - 33,227 \\ \hline \end{array}$$

**8** 
$$\begin{array}{r} 87,591 \\ - 46,280 \\ \hline \end{array}$$

**9** 
$$\begin{array}{r} 90,434 \\ - 51,533 \\ \hline \end{array}$$

**10** 
$$\begin{array}{r} 78,282 \\ - 40,983 \\ \hline \end{array}$$

**11** 
$$\begin{array}{r} 71,731 \\ - 61,320 \\ \hline \end{array}$$

**12** 
$$\begin{array}{r} 50,118 \\ - 18,306 \\ \hline \end{array}$$

**13** 
$$\begin{array}{r} 86,496 \\ - 54,101 \\ \hline \end{array}$$

**14** 
$$\begin{array}{r} 59,176 \\ - 17,222 \\ \hline \end{array}$$

**15** 
$$\begin{array}{r} 89,971 \\ - 11,499 \\ \hline \end{array}$$

**16** Use estimation and addition to check one of your answers. Show your work.

**17** How does checking with addition compare with checking using estimation?

## Multiplication in Word Problems

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

Use a strategy of your choice to solve each problem.

- 1** The library has 5 mystery books on a shelf. It has 4 times as many fiction books on another shelf. How many fiction books are on the shelf?

There are \_\_\_\_\_ fiction books on the shelf.

- 3** Violet has 3 markers. She has 6 times as many colored pencils as markers. How many colored pencils does she have?

Violet has \_\_\_\_\_ colored pencils.

- 5** Tasha used 8 tomatoes to make salsa. She used 4 times as many tomatoes to make sauce. How many tomatoes did Tasha use to make sauce?

Tasha used \_\_\_\_\_ tomatoes to make sauce.

- 7** There are 9 school buses in the parking lot. There are 6 times as many cars as school buses in the parking lot. How many cars are in the parking lot?

There are \_\_\_\_\_ cars in the parking lot.

- 2** Paul runs 2 laps around the gym. Carrie runs 6 times as many laps as Paul. How many laps does Carrie run?

Carrie runs \_\_\_\_\_ laps.

- 4** Owen draws 7 comics in April. He draws 3 times as many comics in May. How many comics does Owen draw in May?

Owen draws \_\_\_\_\_ comics in May.

- 6** There are 7 pear trees on a farm. There are 7 times as many apple trees as pear trees. How many apple trees are on the farm?

There are \_\_\_\_\_ apple trees.

- 8** There are 8 vases at an art show. There are 9 times as many paintings as vases at the art show. How many paintings are at the art show?

There are \_\_\_\_\_ paintings at the art show.

- 9** Write and solve a word problem for this equation:  $5 \times 6 = ?$

## Modeling Multi-Step Problems

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

**Write an equation to represent each problem. Show your work.**

- 1** The Lopez family goes to the movies. They buy 2 adult tickets for \$6 each and 3 child tickets for \$4 each. Write an equation to represent how much money the family spends on movie tickets,  $t$ .
- 2** Grace earns \$5 each time she walks her neighbor's dog. She walks the dog 5 times in one week. Then she spends \$7 on a book and \$9 on a building set. Write an equation to represent how much money Grace has left,  $m$ .
- 3** During the basketball game, Mika makes 3 baskets worth 2 points each, 2 baskets worth 3 points each, and 2 free throws worth 1 point each. Write an equation to represent how many points Mika scores,  $p$ .
- 4** Will has 20 pounds of apples. He makes 2 batches of applesauce that use 4 pounds each, one batch of apple butter that uses 6 pounds, and he uses 3 pounds to make juice. Write an equation to represent how many pounds of apples Will has left,  $p$ .
- 5** What strategies did you use to write an equation?
- 6** Is there another way you could write one of your equations? Could you write it as two equations? Explain.

**Write and solve an equation for each problem. Show your work.**

- 1** Tasha spends 25 minutes reading on Wednesday night. She spends 17 more minutes reading on Thursday than she did on Wednesday. Write and solve an equation to find how many minutes Tasha spent reading on Wednesday and Thursday nights.

Tasha spent \_\_\_\_\_ minutes reading.

- 2** Erik has 2 bags of bird seed. One bag has 10 pounds of seed, and the other bag has 8 pounds of seed. He fills 7 bird feeders with 2 pounds each. Write and solve an equation to find how many pounds of bird seed are left.

There are \_\_\_\_\_ pounds left.

- 3** There are 15 boys and 19 girls in math club. The tables in Mrs. Miller's classroom seat 4 students each. Write and solve an equation to find how many tables Mrs. Miller will need.

Mrs. Miller will need \_\_\_\_\_ tables.

- 4** Frankie earns \$5 each time he babysits his little sister. He has saved \$30. Frankie wants to save \$52 to buy a new skateboard. Write and solve an equation to find how many more times Frankie will need to babysit.

Frankie will need to babysit \_\_\_\_\_ more times.

- 5** How can you estimate to check one of your answers? Show your work.

## Multiplying a Three-Digit Number by a One-Digit Number

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

**Find the product.**

**1**  $500 \times 4 =$  \_\_\_\_\_

$501 \times 4 =$  \_\_\_\_\_

$506 \times 4 =$  \_\_\_\_\_

**2**  $300 \times 2 =$  \_\_\_\_\_

$299 \times 2 =$  \_\_\_\_\_

$298 \times 2 =$  \_\_\_\_\_

**3**  $400 \times 3 =$  \_\_\_\_\_

$405 \times 3 =$  \_\_\_\_\_

$410 \times 3 =$  \_\_\_\_\_

**4**  $499 \times 6 =$  \_\_\_\_\_

**5**  $706 \times 3 =$  \_\_\_\_\_

**6**  $195 \times 5 =$  \_\_\_\_\_

**7** What pattern do you notice in problem 2? How could it help you solve a problem such as  $297 \times 2$ ?

**8** Choose problem 4, 5, or 6. Explain how you could check your answer.

## Multiplying a Four-Digit Number by a One-Digit Number

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

**Estimate. Circle all the problems that will have products between 18,000 and 32,000. Then find the exact products of only the problems you circled. Show your work.**

**1**  $8,491 \times 2 =$  \_\_\_\_\_

**2**  $6,148 \times 4 =$  \_\_\_\_\_

**3**  $7,062 \times 5 =$  \_\_\_\_\_

**4**  $4,362 \times 5 =$  \_\_\_\_\_

**5**  $1,789 \times 8 =$  \_\_\_\_\_

**6**  $2,206 \times 9 =$  \_\_\_\_\_

**7**  $7,218 \times 4 =$  \_\_\_\_\_

**8**  $9,821 \times 3 =$  \_\_\_\_\_

**9**  $4,762 \times 6 =$  \_\_\_\_\_

**10**  $6,739 \times 6 =$  \_\_\_\_\_

**11**  $7,964 \times 4 =$  \_\_\_\_\_

**12**  $3,618 \times 7 =$  \_\_\_\_\_

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



# Multiplying by Two-Digit Numbers

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

Estimate each multiplication problem to check if the student's answer is reasonable. If not, cross out the answer and write the correct answer.

Multiplication Problems	Student Answers
$14 \times 17$	<del>2,380</del> 238 Estimate: $14 \times 20 = 280$
$15 \times 19$	285
$21 \times 18$	3,078
$16 \times 13$	28

Multiplication Problems	Student Answers
$13 \times 31$	403
$18 \times 17$	3,056
$21 \times 15$	3,015
$12 \times 22$	2,604

**1** How does estimating a multiplication problem help you know if an answer is reasonable?

Use a strategy of your choice to solve each problem.

- 1** There are 5 times as many tulips as rose bushes in a garden. There are 15 tulips. How many rose bushes are in the garden?

There are \_\_\_\_\_ rose bushes in the garden.

- 2** Kelly has 2 times as many quarters as dimes. She has 18 quarters. How many dimes does she have?

Kelly has \_\_\_\_\_ dimes.

- 3** There are 18 blueberries in a bowl. There are 3 times as many blueberries as strawberries in the bowl. How many strawberries are in the bowl?

There are \_\_\_\_\_ strawberries in the bowl.

- 4** Amanda swims for 16 minutes. This is 4 times as many minutes as Julio swims. How many minutes does Julio swim?

Julio swims \_\_\_\_\_ minutes.

- 5** A tile pattern has 6 times as many white squares as gray squares. There are 48 white tiles in the pattern. How many gray tiles are there?

There are \_\_\_\_\_ gray tiles in the pattern.

- 6** Leah has 3 times as many country songs as she has pop songs on her MP3 player. She has 27 country songs. How many pop songs does Leah have?

Leah has \_\_\_\_\_ pop songs.

- 7** Erik sees 42 stars in the sky on Tuesday night. This is 7 times as many stars as he sees on Monday night. How many stars does Erik see on Monday night?

Erik sees \_\_\_\_\_ stars on Monday night.

- 8** Lucas spends 72 minutes cleaning his room. This is 8 times as long as it takes him to wash the dishes. How long does it take Lucas to wash the dishes?

It takes Lucas \_\_\_\_\_ minutes to wash the dishes.

- 9** Write and solve a word problem for this equation:  $6 \times n = 54$

## Dividing with Arrays and Area Models

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

The answers to problems 1–12 are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1  $606 \div 2 =$  \_\_\_\_\_

2  $606 \div 3 =$  \_\_\_\_\_

3  $903 \div 3 =$  \_\_\_\_\_

4  $408 \div 8 =$  \_\_\_\_\_

5  $243 \div 3 =$  \_\_\_\_\_

6  $721 \div 7 =$  \_\_\_\_\_

7  $545 \div 5 =$  \_\_\_\_\_

8  $488 \div 8 =$  \_\_\_\_\_

9  $816 \div 4 =$  \_\_\_\_\_

10  $728 \div 8 =$  \_\_\_\_\_

11  $459 \div 9 =$  \_\_\_\_\_

12  $366 \div 6 =$  \_\_\_\_\_

13 What strategies did you use to solve the problems?

14 Explain how to use multiplication to check your answer to problem 10.

### Answers

91	303	61	202	204	109
81	51	301	103	51	61

## Dividing with Estimation and Area Models

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

**Check the student's answer by multiplying the quotient by the divisor and adding the remainder. If an answer is incorrect, cross out the answer and write the correct quotient, including the remainder.**

Division Problems	Student Answers
$637 \div 4$	<del>149 R 1</del> 159 R 1 Check: $149 \times 4 = 596$ $596 + 1 = 597$
$139 \div 2$	69 R 1
$188 \div 5$	38 R 2
$344 \div 6$	57 R 3
$458 \div 9$	58 R 8
$222 \div 7$	31 R 5
$692 \div 8$	85 R 4
$479 \div 3$	169 R 2

## Dividing with Estimation and Area Models *continued*

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

**1** Write a word problem that could be solved by one of the problems.

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

## Dividing Four-Digit Numbers

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

**Estimate. Circle all the problems with quotients between 500 and 1,500.  
Then find the exact quotients of only the problems you circled.**

**1**  $2,508 \div 4 =$  \_\_\_\_\_

**2**  $7,058 \div 9 =$  \_\_\_\_\_

**3**  $2,726 \div 9 =$  \_\_\_\_\_

**4**  $7,429 \div 5 =$  \_\_\_\_\_

**5**  $3,506 \div 9 =$  \_\_\_\_\_

**6**  $8,318 \div 8 =$  \_\_\_\_\_

**7**  $7,645 \div 2 =$  \_\_\_\_\_

**8**  $4,113 \div 4 =$  \_\_\_\_\_

**9**  $3,196 \div 5 =$  \_\_\_\_\_

**10**  $5,018 \div 7 =$  \_\_\_\_\_

**11**  $8,127 \div 6 =$  \_\_\_\_\_

**12**  $6,155 \div 3 =$  \_\_\_\_\_

**13** What strategies did you use to estimate the quotients? Explain.

**14** Check one of your answers by solving it with a different strategy. Show your work.

# Understanding of Equivalent Fractions

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

Write the missing numbers in the boxes to make each equation true.

$$1 \quad \frac{2}{4} \times \frac{\square}{\square} = \frac{8}{16}$$

$$2 \quad \frac{2}{3} \times \frac{\square}{\square} = \frac{12}{18}$$

$$3 \quad \frac{5}{6} \times \frac{\square}{\square} = \frac{25}{30}$$

$$4 \quad \frac{2}{3} \times \frac{\square}{3} = \frac{6}{\square}$$

$$5 \quad \frac{3}{8} \times \frac{5}{\square} = \frac{15}{\square}$$

$$6 \quad \frac{5}{6} \times \frac{\square}{\square} = \frac{\square}{12}$$

$$7 \quad \frac{5}{\square} \times \frac{\square}{\square} = \frac{15}{24}$$

$$8 \quad \frac{2}{\square} \times \frac{4}{\square} = \frac{\square}{12}$$

$$9 \quad \frac{\square}{8} \times \frac{2}{\square} = \frac{\square}{16}$$

10 Which strategies did you use to solve the problems? Explain why.



## Using Common Numerators and Denominators

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

Compare the fractions. Write  $<$ ,  $>$ , or  $=$ .

1  $\frac{3}{4}$  ○  $\frac{3}{8}$

2  $\frac{2}{3}$  ○  $\frac{4}{5}$

3  $\frac{1}{5}$  ○  $\frac{2}{10}$

4  $\frac{2}{10}$  ○  $\frac{23}{100}$

5  $\frac{7}{8}$  ○  $\frac{3}{4}$

6  $\frac{7}{12}$  ○  $\frac{5}{6}$

7  $\frac{10}{12}$  ○  $\frac{5}{6}$

8  $\frac{53}{100}$  ○  $\frac{1}{2}$

9  $\frac{2}{8}$  ○  $\frac{9}{12}$

10  $\frac{1}{6}$  ○  $\frac{3}{12}$

11  $\frac{4}{5}$  ○  $\frac{77}{100}$

12  $\frac{1}{3}$  ○  $\frac{5}{12}$

13  $\frac{1}{4}$  ○  $\frac{2}{12}$

14  $\frac{9}{10}$  ○  $\frac{90}{100}$

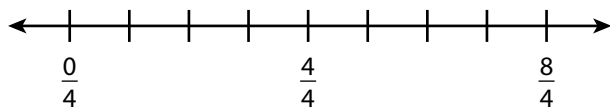
15  $\frac{2}{3}$  ○  $\frac{3}{6}$

16 Show a model you can use to check your answer to problem 12.

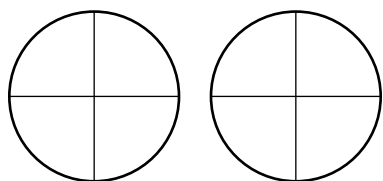
# Understanding of Fraction Addition and Subtraction

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

- 1** Label the number line and use it to show  $\frac{3}{4} + \frac{3}{4}$ .

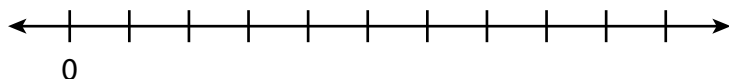


Shade the area model to show  $\frac{3}{4} + \frac{3}{4}$ .

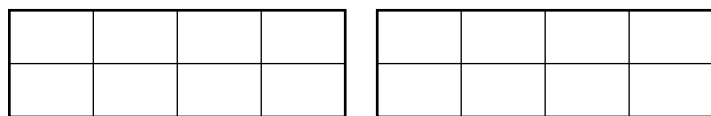


Write the sum.  $\frac{3}{4} + \frac{3}{4} =$

- 2** Label the number line and use it to show  $\frac{10}{8} - \frac{4}{8}$ .



Show  $\frac{10}{8} - \frac{4}{8}$  on the area model.



Write the difference.  $\frac{10}{8} - \frac{4}{8} =$

## Understanding of Fraction Addition and Subtraction *continued*

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

- 3** What type of model do you like best for showing fraction addition and subtraction? Explain why.

- 4** Compare subtracting  $\frac{10}{8} - \frac{4}{8}$  to subtracting  $10 - 4$ . How are they alike?  
How are they different?

# Adding Fractions

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

Write the missing numbers in the boxes to make each addition problem true.

1  $\frac{1}{6} + \frac{4}{6} = \frac{\square}{6}$

2  $\frac{1}{8} + \frac{4}{8} = \frac{\square}{\square}$

3  $\frac{1}{10} + \frac{4}{10} = \frac{\square}{\square}$

4  $\frac{4}{12} + \frac{\square}{\square} = \frac{7}{12}$

5  $\frac{4}{6} + \frac{\square}{\square} = \frac{7}{6}$

6  $\frac{4}{3} + \frac{\square}{\square} = \frac{7}{3}$

7  $\frac{\square}{\square} + \frac{2}{4} = \frac{5}{4}$

8  $\frac{\square}{\square} + \frac{2}{10} = \frac{5}{10}$

9  $\frac{\square}{\square} + \frac{2}{8} = \frac{5}{8}$

10  $\frac{\square}{6} + \frac{2}{6} = \frac{\square}{6}$

11  $\frac{\square}{5} + \frac{1}{5} = \frac{\square}{5}$

12  $\frac{4}{10} + \frac{\square}{10} = \frac{\square}{10}$

13 Write a number from 1–12 in each box so that the addition problem is true.

$$\frac{\square}{12} + \frac{5}{\square} = \frac{\square}{12}$$

## Subtracting Fractions

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

### Solve each problem.

- 1** Sammy has  $\frac{4}{5}$  of his art project left to paint. He paints  $\frac{2}{5}$  of the project. What fraction of the project is left to paint?
- 2** Marianne has  $\frac{6}{8}$  of a yard of green ribbon. She uses  $\frac{3}{8}$  of a yard for a craft project. How much green ribbon is left?
- 3** Yuna plans to run 1 mile. She has run  $\frac{7}{10}$  of a mile so far. What fraction of a mile does she have left to run?
- 4** Alex and Brady are helping to pack books into a box. Together they pack  $\frac{7}{12}$  of the books. Alex packs  $\frac{4}{12}$  of the books. What fraction of the books does Brady pack?

## Subtracting Fractions *continued*

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

- 5** On Monday, Adam walks  $\frac{3}{10}$  of a mile to the store and then  $\frac{4}{10}$  of a mile to the park. How far does he walk in all?
- 6** Javier has  $\frac{7}{8}$  of a cup of flour. He uses  $\frac{3}{8}$  of a cup in a recipe. How much flour does Javier have left?
- 7** Shawna practices piano for  $\frac{4}{6}$  of an hour and takes a break. Shawna then practices for  $\frac{2}{6}$  of an hour more. How long does Shawna practice in all?
- 8** Kailee has finished  $\frac{4}{5}$  of her math homework so far. What fraction of her math homework does she have left to finish?
- 9** Explain one way to check your work to problem 2.

# Decomposing Fractions

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

Find three ways to decompose each fraction into a sum of other fractions with the same denominator.

**1**  $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \underline{\hspace{2cm}}$

$$\frac{3}{4} = \frac{2}{4} + \underline{\hspace{2cm}}$$

$$\frac{3}{4} = \frac{1}{4} + \underline{\hspace{2cm}}$$

**2**  $\frac{7}{8} = \frac{6}{8} + \underline{\hspace{2cm}}$

$$\frac{7}{8} = \frac{5}{8} + \underline{\hspace{2cm}}$$

$$\frac{7}{8} = \frac{4}{8} + \underline{\hspace{2cm}}$$

**3**  $\frac{6}{5} = \underline{\hspace{2cm}} + \frac{3}{5}$

$$\frac{6}{5} = \frac{2}{5} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$\frac{6}{5} = \frac{2}{5} + \frac{2}{5} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

**4**  $\frac{5}{6} = \underline{\hspace{2cm}} + \frac{3}{6}$

$$\frac{5}{6} = \frac{1}{6} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$\frac{5}{6} = \frac{1}{6} + \frac{1}{6} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

**5**  $\frac{9}{12} = \underline{\hspace{2cm}} + \frac{5}{12}$

$$\frac{9}{12} = \frac{3}{12} + \frac{3}{12} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$\frac{9}{12} = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

**6**  $\frac{8}{10} = \underline{\hspace{2cm}} + \frac{4}{10}$

$$\frac{8}{10} = \frac{2}{10} + \frac{3}{10} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$\frac{8}{10} = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

**7** Describe your strategy for finding the missing numbers.