

**Objectives**

- Identify the number that is 1,000 more or 1,000 less; 10,000 more or 10,000 less
- Add 4- and 5-digit numbers with renaming
- Estimate the sum by rounding to the nearest one thousand or the nearest ten thousand
- Solve a word problem with 3 addends

**Teacher Materials**

- Place Value Pocket Chart Kit
- Multiplication flashcards: 2 as a factor, and previously reviewed multiplication facts

**Student Materials**

- Number Cards: 0–9

**Practice and Review**

**10 more or 10 less; 100 more or 100 less**

1. Lead in counting by 10s and by 100s from a 1-digit number such as 2, 4, or 9. (e.g., 2, 12, 22, . . . 92 or 4, 104, 204, . . . 904).
2. Write 4-, 5-, and 6-digit numbers for display. Guide the students in identifying the number that is 10 more/10 less, or 100 more/100 less for each number.

**Multiplication facts: 2 as a factor**

1. Display slowly, one at a time, the multiplication flashcards with 2 as a factor, and multiplication facts reviewed in previous lessons. Allow volunteers to give the answers.
  - **What strategy can you use to help you remember the facts that have 2 as a factor?** *count by 2s; addition double facts*
2. Distribute Number Cards 0–9. Display each flashcard. Direct each student to use the Number Cards to “write” the product.

**Introduce the Lesson**

God has created millions of animals. He cares about each one and created them with the ability to protect and care for their young.

When God created man, God gave man *dominion*, or control, over all the animals. And when God sent the Flood, He commanded Noah to take two of every kind of animal into the ark to keep them alive (Genesis 1:28; 6:19).

Today, people who care for and study animals often use large numbers to record information about the millions of animals in our world. [Bible Promise: I. God as Master]

**Teach for Understanding**

**Identify the number that is 1,000 more or 1,000 less; 10,000 more or 10,000 less**

1. Display 6,871 in the Place Value Pocket Chart. Choose a student to read the number aloud. *six thousand, eight hundred seventy-one*
  - **How would you add 1,000 to this number?** *Elicit that you would increase the One Thousands place by 1.*

- Remove the 6 and put a 7 in the One Thousands place.
  - **What is 1,000 more than 6,871?** *7,871*
- 2. Display 9,208 in the pocket chart. Choose a student to read the number. *nine thousand, two hundred eight*
  - **How many one thousands are in this number?** *9*
  - **How many one thousands will there be if you add 1 more one thousand?** *10*
  - **What does 10 one thousands equal?** *1 ten thousand*
 Remove the 9 and put a 0 in the One Thousands place and a 1 in the Ten Thousands place.
  - **What is 1,000 more than 9,208?** *10,208*
- 3. Display 38,621 and choose a student to read the number. *thirty-eight thousand, six hundred twenty-one*
  - **How can you find the number that is 10,000 less than this number?** *Subtract 10,000 from the Ten Thousands place or decrease the Ten Thousands place by 1. What is 10,000 less than 38,621?* *28,621* **What is 10,000 more than 38,621?** *48,621*
- 4. Display 10,876 and choose a student to read the number. *ten thousand, eight hundred seventy-six*
  - **What is 10,000 less than 10,876?** *876*
  - **What is 10,000 more than 10,876?** *20,876*

**Add 4- and 5-digit numbers with renaming**

1. Write for display  $8,361 + 4,824 = \underline{\quad}$  in vertical form and choose a student to add the ones. *5*
  - Select another student to add the tens. *8*
  - **Add the hundreds. How many hundreds are there?** *11*
  - **Can you write 11 in the Hundreds place?** *no* **What must you do?** *Rename 10 hundreds as 1 one thousand.* Write 1 in the Hundreds place and 1 above the One Thousands place.
  - **Add the one thousands. How many one thousands are there?** *13*
  - **Can you write 13 one thousands in the One Thousands place?** *no* **What must you do?** *Rename 10 one thousands as 1 ten thousand.*
  - **Are there any other ten thousands to add?** *no*
2. Explain that when there are no digits to add in the place that you renamed to, you can write the 2-digit number in the appropriate places of the answer. Write 13 one thousands in the answer.
  - **What does  $8,361 + 4,824$  equal?** *13,185*
  - **What is the value of each digit in the Thousands period?** *1 ten thousand and 3 one thousands or 10,000 and 3,000*
3. Write  $68,275 + 57,231 = \underline{\quad}$  in vertical form. Choose a student to write the solution for display as you guide the students in solving the problem.
 

Add the ones, tens, hundreds, and one thousands; ask questions similar to those in the previous problem.

  - **How many ten thousands are there?** *12*
  - **What can you do next? Why?** *Elicit that you can write 12 in the answer because there are no digits to add in the Hundred Thousands place.* Write 12 ten thousands in the answer.
  - **What is  $68,275 + 57,231$ ?** *125,506*
  - **What is the value of the 1 in the Thousands period?** *1 hundred thousand or 100,000 the 2? 2 ten thousands or 20,000*
4. Write these problems for display. Choose students to solve them as the other students solve them on paper. Remind the students to include a comma in each answer.

$25,462$	$9,367$	$48,360$
$+ 38,154$	$+ 3,182$	$+ 75,284$
$63,616$	$12,549$	$123,644$

## 4- & 5-Digit Addition

Name \_\_\_\_\_

Complete the table.

	1,000 less	1,000 more		10,000 less	10,000 more		
1.	<b>1,476</b>	2,476	<b>3,476</b>	4.	<b>62,318</b>	72,318	<b>82,318</b>
2.	<b>3,803</b>	4,803	<b>5,803</b>	5.	<b>86,156</b>	96,156	<b>106,156</b>
3.	<b>95</b>	1,095	<b>2,095</b>	6.	<b>4,351</b>	14,351	<b>24,351</b>

Estimate by rounding to the nearest one thousand. Solve.

<p>7. <b>Estimate</b></p> $\begin{array}{r} 6,000 \\ + 3,000 \\ \hline 9,000 \end{array}$	$\begin{array}{r} 6,478 \\ + 2,516 \\ \hline 8,994 \end{array}$	<p>8. <b>Estimate</b></p> $\begin{array}{r} 4,000 \\ + 6,000 \\ \hline 10,000 \end{array}$	$\begin{array}{r} 4,175 \\ + 5,798 \\ \hline 9,973 \end{array}$
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Estimate by rounding to the nearest ten thousand. Solve.

<p>9. <b>Estimate</b></p> $\begin{array}{r} 40,000 \\ + 20,000 \\ \hline 60,000 \end{array}$	$\begin{array}{r} 43,847 \\ + 18,706 \\ \hline 62,553 \end{array}$	<p>10. <b>Estimate</b></p> $\begin{array}{r} 30,000 \\ + 50,000 \\ \hline 80,000 \end{array}$	$\begin{array}{r} 25,068 \\ + 51,277 \\ \hline 76,345 \end{array}$
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Add.

<p>11. <math display="block">\begin{array}{r} 53,985 \\ + 42,722 \\ \hline 96,707 \end{array}</math></p>	<p>12. <math display="block">\begin{array}{r} 6,473 \\ + 1,951 \\ \hline 8,424 \end{array}</math></p>
<p>13. <math display="block">\begin{array}{r} 28,518 \\ + 32,324 \\ \hline 60,842 \end{array}</math></p>	<p>14. <math display="block">\begin{array}{r} 5,178 \\ + 2,394 \\ \hline 7,572 \end{array}</math></p>

Solve and label.

15. A Spanish ship carried gold and silver. It carried 3,475 pounds the first year, 3,107 pounds the second year, and 2,523 pounds the third year. How many pounds of gold and silver did the ship carry?

**Workspace**

$$\begin{array}{r} 3,475 \\ 3,107 \\ + 2,523 \\ \hline 9,105 \end{array}$$

$$3,475 + 3,107 + 2,523 = 9,105 \text{ pounds}$$

Math 4 Worktext, Chapter 2, Lesson 16

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Write the rule for the table.

1. Rule:  $m + 1,000 = n$

m	n
6,415	7,415
8,013	9,013
1,867	2,867

2. Rule:  $a + 10,000 = b$

a	b
24,006	34,006
11,608	21,608
36,817	46,817



Solve. Use the Commutative Property to write the related addition fact.

<p>3. <math display="block">\begin{array}{r} 5 \\ + 9 \\ \hline 14 \end{array}</math></p>	<p>4. <math display="block">\begin{array}{r} 7 \\ + 6 \\ \hline 13 \end{array}</math></p>	<p>5. <math display="block">\begin{array}{r} 5 \\ + 0 \\ \hline 5 \end{array}</math></p>	<p>6. <math display="block">\begin{array}{r} 8 \\ + 7 \\ \hline 15 \end{array}</math></p>
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Round to the place with the greatest value. Circle the estimated answer. Solve.

<p>7. <b>Estimate</b></p> $\begin{array}{r} 7,000 \\ \textcircled{8,000} \\ 9,000 \end{array}$	$\begin{array}{r} 3,462 \\ + 4,847 \\ \hline 8,309 \end{array}$	<p>8. <b>Estimate</b></p> $\begin{array}{r} 40,000 \\ 50,000 \\ \textcircled{60,000} \end{array}$	$\begin{array}{r} 23,652 \\ + 38,975 \\ \hline 62,627 \end{array}$
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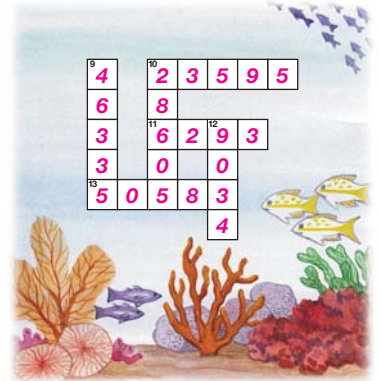
Solve the problems. Complete the puzzle.

Across Down

<p>10. <math display="block">\begin{array}{r} 11,276 \\ + 12,319 \\ \hline 23,595 \end{array}</math></p>	<p>9. <math display="block">\begin{array}{r} 28,562 \\ + 17,773 \\ \hline 46,335 \end{array}</math></p>
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<p>11. <math display="block">\begin{array}{r} 1,426 \\ + 4,867 \\ \hline 6,293 \end{array}</math></p>	<p>10. <math display="block">\begin{array}{r} 19,536 \\ + 9,069 \\ \hline 28,605 \end{array}</math></p>
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<p>13. <math display="block">\begin{array}{r} 27,103 \\ + 23,480 \\ \hline 50,583 \end{array}</math></p>	<p>12. <math display="block">\begin{array}{r} 2,437 \\ + 6,597 \\ \hline 9,034 \end{array}</math></p>
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Complete **Daily Review** on page 57.

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Math 4 Worktext, Chapter 2, Lesson 16

## Estimate the sum by rounding

- ▶ **What is estimating?** finding an answer close to the exact answer
- ▶ **Why might you want to estimate?** Answers will vary, but elicit to help you determine whether your exact answer is reasonable.

1. Write this problem for display. (Do not write the estimates or answer yet.)

$$\begin{array}{r} 7,000 \leftarrow 7,321 \\ + 6,000 \leftarrow + 5,834 \\ \hline 13,000 \quad 13,155 \end{array}$$

2. Remind the students that they can look at the digit immediately to the right of the rounding digit to determine whether to round 7,321 up or down.

- ▶ **Is 7,321 nearer to 7,000 or 8,000? How do you know?** 7,000; the 3 in the Hundreds place is less than 5.

Write 7,000 in front of the arrow beside 7,321.

- ▶ **Is 5,834 nearer to 5,000 or 6,000? How do you know?** 6,000; the 8 in the Hundreds place is greater than 5.

Write + 6,000 in front of the arrow beside + 5,834.

- ▶ **What is 7,000 + 6,000?** 13,000 Write the estimated answer.

3. Choose a student to solve the problem.

- ▶ **What is the exact answer?** 13,155

- ▶ **Is 13,155 a reasonable answer? Why?** Answers will vary, but elicit that when you are adding thousands, a difference of about 200 between the estimated and the exact answer is considered reasonable.

4. Follow a similar procedure for estimating and solving this problem.

$$\begin{array}{r} 30,000 \leftarrow 29,574 \\ + 50,000 \leftarrow + 45,618 \\ \hline 80,000 \quad 75,192 \end{array}$$

## Solve a word problem with 3 addends

The Johnson family took a month-long vacation traveling across the United States. First, they traveled 2,905 miles from New York to San Francisco. The second week they traveled 1,757 miles to Austin, Texas. During the third week of their vacation, they drove 966 miles to Atlanta, Georgia. How many miles did they travel during the first 3 weeks of their vacation?

- ▶ **What is the question asking you to find?** how many miles the Johnsons traveled
- ▶ **What information is given?** 2,905 miles to San Francisco, 1,757 miles to Austin, and 966 miles to Atlanta
- ▶ **What operation do you use?** addition
- ▶ **What is your equation?**  $2,905 + 1,757 + 966 = \underline{\quad}$

- Write the equation for display. Guide the students in mentally estimating the distance traveled.  
 $3,000 + 2,000 + 1,000 = 6,000 \text{ miles}$
- Direct the students to write the equation vertically on paper and solve it. Remind them to align their numbers correctly.
  - ▶ **How many miles did the Johnsons travel?** 5,628 miles
  - ▶ **Does your answer make sense? How do you know?** Accept any reasonable answer.



**Worktext pages 39–40, 57 (c)**