

**Objectives**

- Develop an understanding that the value of each place is ten times greater than the place of lesser value immediately to its right
- Develop an understanding of the repetition of the Ones, Tens, and Hundreds places in each period
- Identify the value of the digits in a number with 9 or fewer digits
- Read and write numbers with 6 or fewer digits

**Teacher Materials**

- Place Value Kit: 1 one, 1 ten, 1 hundred, 1 one thousand
- Place Value Pocket Chart Kit
- Periods Comparison transparency, page IA1 (CD)
- A craft stick

**Student Materials** (to be shared by the entire class)

- Rubber bands (100 minimum)
- Masking tape (5 rolls)
- Craft sticks (1,120 minimum)

**Note**

You may want to use coffee stirrers or straws rather than craft sticks.

**Practice and Review****Subtraction facts**

Select a Fact Fun activity from Appendix pages A10–A13 to practice facts with a difference of 0–9.

**Introduce the Lesson**

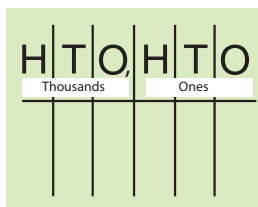
God promised Abram that he would have many children who would become a great nation of many people. When God made this promise, He told Abram that his children would be as “the dust of the earth” (Genesis 13:16). Later, God reminded Abram of this promise by saying that Abram’s children would be “as the stars of the heaven, and as the sand which is upon the sea shore” (Genesis 22:17). [Bible Promise: I. God as Master]

- **How many stars do you think are in the sky? Elicit large numbers.** grains of sand on a beach?
- **When are large numbers such as 200 thousand, 500 million, and 8 billion used? Accept any answer.**

**Teach for Understanding**

Develop an understanding that the value of each place is ten times greater than the place of lesser value immediately to its right

1. Arrange the students in 5 groups and give each group a minimum of 224 craft sticks, a minimum of 20 rubber bands, and a roll of masking tape.
2. Draw a 6-digit Place Value frame for display; label the Ones period and the Thousands period. Display in the Ones place of the Place Value frame 1 one from the Place Value Kit and 1 craft stick below the 1



one. Explain that each craft stick will have the same value as 1 one.

3. Direct each group to discuss how they can make 1 ten using the craft sticks and the rubber bands or masking tape, and then to make as many tens as possible.
  - **How did you make 1 ten? Bundle 10 sticks together.** In the Tens place of the Place Value frame, display 1 ten from the Place Value Kit and then 1 “craft stick ten” below the 1 ten.
4. Direct each group to discuss how they can make 1 hundred and then to make as many hundreds as possible.
  - **How did you make 1 hundred? Answers may vary, but elicit by bundling 10 “craft stick tens” together.** In the Hundreds place of the Place Value frame, display 1 hundred from the Place Value Kit and then 1 “craft stick hundred” below the 1 hundred.
  - **How would you make 1 one thousand? Answers may vary, but elicit that all five groups would need to combine their “craft stick hundreds” so that 10 “craft stick hundreds” can be bundled together to make 1 “craft stick one thousand.”**
5. In the One Thousands place of the Place Value frame, display 1 one thousand from the Place Value Kit and then 1 “craft stick one thousand” below.
  - **What do you notice about how each place with a greater value is formed? Elicit that you need ten in a place to make one in the next place of greater value.**
6. Point to the Ten Thousands place in the Place Value frame.
  - **How many one thousands do you need to make 1 ten thousand? How do you know? 10; elicit that you need ten in a place to make one in the next place of greater value.** Point out that the value of each place is ten times greater than the place of lesser value immediately to its right. Discuss how large 1 “craft stick ten thousand” might be.
7. Point to the Hundred Thousands place in the Place Value frame.
  - **How many ten thousands do you need to make 1 hundred thousand? 10** Discuss how large 1 “craft stick hundred thousand” might be.

**Develop an understanding of periods**

1. Display the Periods Comparison transparency. Cover all the pictures except for the 1 one and the 1 one thousand.
  - **What do you notice about the shape of the 1 one and the shape of the 1 one thousand? Elicit that the shapes are similar; both are cube shapes, but the one thousand cube is larger.**
2. Show the ten on the transparency.
  - **If 1 ten looks like a tall, thin stack of ones, what do you think 1 ten thousand will look like? Elicit a taller, wider stack of one thousands.** Show the ten thousand; point out the similarity between its shape and the shape of the ten.
3. Show the hundred on the transparency.
  - **If 1 hundred looks like a square waferlike shape made of tens, what do you think 1 hundred thousand will look like? a larger square waferlike shape made of ten thousands** Show the hundred thousand; point out the similarity between its shape and the shape of the hundred.
  - **Why are the pictures representing the ones, tens, and hundreds in the Thousands period larger than those in the Ones period? The places in the Thousands period have a greater value than the places in the Ones period.**

## Place Value Periods

Name \_\_\_\_\_

Fill in the missing labels on the place value chart. Read the number.

O T H Ones Thousands Millions

<u>H</u>	<u>T</u>	<u>O</u>	<u>H</u>	<u>T</u>	<u>O</u>	<u>H</u>	<u>T</u>	<u>O</u>
Millions			Thousands			Ones		
	4	1	8	6	2	7	9	4

Circle the digit in the place listed. Write the value of the circled digit.

- Hundreds place 512,654 600
- Ten Thousands place 139,842 30,000
- One Thousands place 487,210 7,000
- Hundred Thousands place 864,137 800,000



Match the number to the word form or expanded form.

- D 68,395 A. seventeen thousand, five hundred sixty
- C 143,271 B. six thousand, eight hundred seventeen
- A 17,560 C. one hundred forty-three thousand, two hundred seventy-one
- E 212,945 D.  $60,000 + 8,000 + 300 + 90 + 5$
- B 6,817 E.  $200,000 + 10,000 + 2,000 + 900 + 40 + 5$

Put commas in the correct places. Read the numbers.

- 2,319,462
- 13,899
- 658,137
- 17,487,210



Math 4 Worktext, Chapter 1, Lesson 2

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Match the number to the word form or expanded form.

- D 9,193 A.  $10,000 + 3,000 + 800 + 70 + 7$
- B 759,842 B. seven hundred fifty-nine thousand, eight hundred forty-two
- A 13,877 C. six hundred eighty-one thousand, six hundred fifty-four
- C 681,654 D.  $9,000 + 100 + 90 + 3$

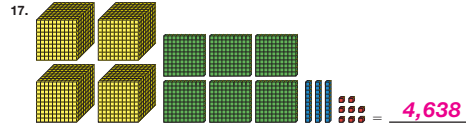
Write the value of the underlined digit.

- 16,981 10,000 6. 27,396 300 7. 8,432 30
- 587,654 500,000 9. 9,142 9,000 10. 930,621 0
- 362,879 60,000 12. 427,365 400,000 13. 65,985 5,000

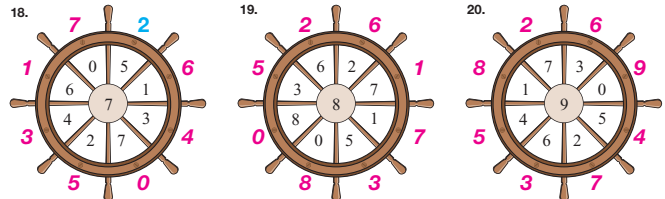
Circle the number that shows the digit with the value listed.

- 4 ten thousands 167,548 58,496 6,821
- 8 hundreds 714,325 185,312 652,347
- 6 hundred thousands 48,163 591,864 369,812

Write the number that is shown.



Complete the subtraction fact wheels.



Complete **Daily Review** on page 25.

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Math 4 Worktext, Chapter 1, Lesson 2

4. Display the Place Value Pocket Chart. Direct attention to the Millions period.

➤ How many hundred thousands do you think you need to make one 1 million? How do you know? 10; elicit that you need ten in a place to make one in the next place of greater value, and that the value of each place is ten times greater than the place of lesser value immediately to its right.

➤ How many 1 millions do you need to make 1 ten million? 10 how many ten millions to make 1 hundred million? 10 Explain that no matter how large the value of a number is, you need ten in a place to make one in the next place of greater value.

### Identify the value of the digits in a number

- Remind the students that the value of each digit in a number is determined by its placement in the Ones, Tens, or Hundreds place of a period and that commas are used to separate the periods.
- Display 725,809,463 in the pocket chart.
  - What digit is in the Ones place? 3 What is its value? 3 Write for display 3 ones = 3.
  - What digit is in the One Thousands place? 9 What is its value? 9,000 Write 9 one thousands = 9,000.
  - What digit is in the One Millions place? 5 What is its value? 5,000,000 Write 5 one millions = 5,000,000.
- Repeat the procedure, asking similar questions about the Tens place in each period and then the Hundreds place. 6, 60; 0, 0; 2, 20,000,000; 4, 400; 8, 800,000; 7, 700,000,000
  - Why do you think zeros are written in these numbers when zeros have no value? Elicit that the digit 0 in a number shows that the place in which the 0 is written has no value.

4. Follow a similar procedure for 98,147,526; 7,436,958; and 259,169. Ask questions in random order about the digits and their values.

### Read and write numbers with 6 or fewer digits

- Write 827,436 for display. Call attention to the digits in each period and the comma that indicates the name of that period as you read the number aloud: *eight hundred twenty-seven thousand, four hundred thirty-six.*
  - What do you notice about how this number is read? Elicit that the digits in each period are read as any other 3-, 2-, or 1-digit number, and that the name of the period is said when you come to the comma at the end of that period.
- Write 69,170. Choose a student to read the number aloud.
- Write for display the word form for 69,170; point out the comma written after the name of the period: *sixty-nine thousand, one hundred seventy.*
- Read together the standard form of 69,170.
- Repeat the procedure for 95,841 and 204,139: *ninety-five thousand, eight hundred forty-one; two hundred four thousand, one hundred thirty-nine.*
- Direct the students to write these numbers in standard form and word form.
  - 619,387 *six hundred nineteen thousand, three hundred eighty-seven*
  - 67,358 *sixty-seven thousand, three hundred fifty-eight*
  - 23,090 *twenty-three thousand, ninety*
  - 750,012 *seven hundred fifty thousand, twelve*



Worktext pages 5–6, 25 (b)