California Mathematics 4

Chapter 1

Resource Masters

Includes:

Chapter Resources
- Graphic Organizer
- Student-Built Glossary
- Family Letter
- Anticipation Guide
- Game

Leveled Lesson Resources
- Reteach
- Skills Practice
- Homework Practice
- Problem-Solving Practice
- Enrich

Assessment Resources
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- Chapter Diagnostic Test
- Chapter Pretest
- 3 Quizzes
- Mid-Chapter Test
- Vocabulary Test
- Oral Assessment
- Chapter Project Rubric
- Foldables Rubric
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- Extended Response Test
- Student Recording Sheet
- Cumulative Standardized Test Practice
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Answer Keys
# Grade 4 Chapter 1
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Teacher’s Guide to Using the
Chapter 1 Resource Masters

The Chapter 1 Resource Masters includes the core materials needed for Chapter 1. These materials include worksheets, extensions, and assessment options. The answers for these pages appear at the back of this booklet.

All of the materials found in this booklet are included for viewing and printing on the TeacherWorks Plus™ CD-ROM.

Chapter Resources

**Graphic Organizer** (page 1) This master is a tool designed to assist students with comprehension of grade-level concepts. You can use this graphic organizer in coordination with the appropriate lesson. While the content and layout of these tools vary, their goal is to assist students by providing a visual representation from which they can learn new concepts.

**Student Glossary** (page 2) This master is a study tool that presents the key vocabulary terms from the chapter. You may suggest that students highlight or star the terms they do not understand. Give this list to students before beginning Lesson 1-1. Remind them to add these pages to their mathematics study notebooks.

**Anticipation Guide** (page 6) This master is a survey designed for use before beginning the chapter. You can use this survey to highlight what students may or may not know about the concepts in the chapter. If feasible, interview students in small groups, asking them the interview questions in the guide. There is space for recording how well students answer the questions before they complete the chapter. You may find it helpful to interview students a second time, after completing the chapter, to determine their progress.

**Game** (page 7) A game is provided to reinforce chapter concepts and may be used at appropriate times throughout the chapter.

**Resources for Lessons**

**Reteach** Each lesson has an associated Reteach worksheet. In general, the Reteach worksheet focuses on the same lesson content but uses a different approach, learning style, or modality than that used in the Student Edition. The Reteach worksheet closes with computational practice of the concept.

**Skills Practice** The Skills Practice worksheet for each lesson focuses on the computational aspect of the lesson. The Skills Practice worksheet may be helpful in providing additional practice of the skill taught in the lesson. It also contains word problems that cover the skill. Spaces for students’ answers are provided on the worksheet.

**Homework Practice** The Homework Practice worksheet provides an opportunity for additional computational practice. The Homework Practice worksheet includes word problems that address the skill taught in the lesson. Spaces for students’ answers are provided on the worksheet.

**Problem-Solving Practice** The Problem-Solving Practice worksheet presents additional reinforcement in solving word problems that apply both the concepts of the lesson and some review concepts.

**Enrich** The Enrich worksheet presents activities that extend the concepts of the lesson or offer a historical or multicultural look at the lesson’s concepts. Some Enrich materials are designed to widen students’ perspectives on the mathematics they are learning.

**Resources for Problem-Solving Lessons** In recognition of the importance of problem-solving strategies, worksheets for problem-solving lessons follow a slightly different format. For problem-solving lessons, a two-page Reteach worksheet offers a complete model for choosing a problem-solving strategy. For each Problem-Solving Strategy lesson, Reteach and Homework Practice worksheets offer reinforcement of
the strategy taught in the Student Edition lesson. In contrast, the Problem-Solving Investigation worksheets include a model strategy on the Reteach worksheets and provide problems requiring several alternate strategies on practice worksheets.

**Assessment Options**

The assessment masters in the *Chapter 1 Resource Masters* offer a wide variety of assessment tools for monitoring progress as well as final assessment.

**Inventory Placement Test** This two-page test covers key concepts from the previous year and tests what students are expected to bring to the current grade level.

**Individual Progress Checklist** This checklist explains the chapter’s goals or objectives. Teachers can record whether a student’s mastery of each objective is beginning (B), developing (D), or mastered (M). The checklist includes space to record notes to parents as well as other pertinent observations.

**Chapter Diagnostic Assessment** This one-page test assesses students’ grasp of skills that are needed for success in the chapter.

**Chapter Pretest** This one-page quick check of the chapter’s concepts is useful for determining pacing. Performance on the pretest can help you determine which concepts can be covered quickly and which specific concepts may need additional time.

**Quizzes** Three Free-response quizzes offer quick assessment opportunities at appropriate intervals in the chapter.

**Mid-Chapter Review** This one-page chapter test provides an option to assess the first half of the chapter. It includes both multiple-choice and free-response questions.

**Vocabulary Test** This one-page test focuses on chapter vocabulary. It is suitable for all students. It includes a list of vocabulary words and questions to assess students’ knowledge of the words.

**Oral Assessment** This two-page test consists of teacher directions and questions and a place for recording responses. Although this assessment is designed to be used with all students, the interview format focuses on assessing chapter content assimilated by ELL students. The variety of approaches includes solving problems using manipulatives as well as pencil and paper.

**Chapter Project Rubric** This one-page rubric is designed for use in assessing the chapter project. You may want to distribute copies of the rubric when you assign the project and use the rubric to record each student’s chapter project score.

**Foldables Rubric** This one-page rubric is designed to assess the Foldables graphic organizer. The rubric is written to the students, telling them what you will be looking for as you evaluate their completed Foldables graphic organizer.

**Leveled Chapter Tests**

- **Form 1** assesses basic chapter concepts through multiple-choice questions.
- **Form 2A** is primarily for those who may have missed the Form 1 test. It may be used as a retest for students who received additional instruction following the Form 1 test.
- **Form 2B** is designed for students with a below-level command of the English language.
- **Form 2C** is a free-response test.
- **Form 2D** is written for students with a below-level command of the English language.
- **Form 3** is a free-response test written for above-level students.
- **Extended-Response Test** is an extended response test for on-level students.

**Cumulative Standardized Test Practice** This three-page test, aimed at on-level students, offers multiple-choice questions and free-response questions.

**Answers**

The answers for the Anticipation Guide and Lesson Resources are provided as reduced pages with answers appearing in black. Full size line-up answer keys are provided for the Assessment Masters.
Use this graphic organizer to take notes on Chapter 1: **Place Value and Number Sense**.

Fill in the missing sections of the graphic organizer.

<table>
<thead>
<tr>
<th>Term</th>
<th>Symbol</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>is greater than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is less than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is equal to</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>standard form</td>
<td>the usual way to write a number using digits</td>
<td></td>
</tr>
<tr>
<td>word form</td>
<td>the way in which you read or say a number</td>
<td></td>
</tr>
<tr>
<td>expanded form</td>
<td>the way a number is written to show the value of each digit</td>
<td></td>
</tr>
</tbody>
</table>
# Student-Built Glossary

This is an alphabetical list of new vocabulary terms you will learn in **Chapter 1 Place Value and Number Sense**. As you study the chapter, complete each term’s definition or description. Remember to add the page number where you found the term. Add this page to your math study notebook to review vocabulary at the end of the chapter.

<table>
<thead>
<tr>
<th>Vocabulary Term</th>
<th>Found on Page</th>
<th>Definition/Description/Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>is equal to</td>
<td></td>
<td></td>
</tr>
<tr>
<td>estimate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>expanded form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>digits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is greater than</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is less than</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Student-Built Glossary (continued)

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>number line</td>
<td></td>
</tr>
<tr>
<td>period</td>
<td></td>
</tr>
<tr>
<td>place value</td>
<td></td>
</tr>
<tr>
<td>round</td>
<td></td>
</tr>
<tr>
<td>standard form</td>
<td></td>
</tr>
</tbody>
</table>
Dear Family,

Today my class started Chapter 1, Place Value and Number Sense. I will be learning to read and write whole numbers to millions, compare and order whole numbers, and use the four-step plan to solve problems. I will also be learning to round whole numbers to the nearest ten, hundred, thousand, and ten thousand. Here are my vocabulary words and an activity that we can do together.

Love, ________________

Key Vocabulary

place value  The value given to a digit by its place in a number.

standard form  The usual way of writing a number that shows only its digits, no words.

expanded form  The representation of a number as a sum that shows the value of each digit. 536 can be written as 500 \( + \) 30 \( + \) 6.

is greater than (>) An inequality relationship showing that the number on the left of the symbol is greater than the number on the right. 5 > 3, five is greater than three.

is less than (<) The number on the left side of the symbol is smaller than the number on the right side. 4 < 7, 4 is less than 7.

Activity

Write each of the following numbers on an index card or small piece of paper: 2,000; 6,000; 1,000; 500; 900; 300; 60; 30; 4; 8; and 9. Use the cards to represent the following numbers in expanded form: 2,969, 1,530, 6,068, and 564. Place addition signs between the cards to represent expanded form.

Books to Read

Reeses’ Pieces Count By Fives
by Jeffrey Pallotta

The Warlord’s Beads
by Virginia Walton Pilegard

A Gram of Rice
by Helena Clare Pittman
Estimada familia:

Hoy mi clase comenzó el Capítulo 1, El valor de posición y el sentido numérico. Aprenderé a leer y a escribir números enteros hasta los millones, a comparar y a ordenar números enteros y a usar el plan de cuatro pasos para resolver problemas y también a redondear números enteros a la decena, centena, unidad de millar y decena de millar más cercana. A continuación, están mis palabras de vocabulario y una actividad que podemos hacer juntos.

Cariños, _____________

Vocabulario clave

**valor de posición** El valor dado a un dígito según su posición en un número

**forma estándar** Manera habitual de escribir un número que sólo muestra sus dígitos, sin palabras

**forma desarrollada** Representación de un número como una suma que muestra el valor de cada dígito. 536 se escribe como 500 + 30 + 6

**es mayor que** (>)Relación de desigualdad que muestra que el número a la izquierda del símbolo es mayor que el número a la derecha. 5 > 3, cinco es mayor que 3

**es menor que** (<)El número a la izquierda del símbolo es más pequeño que el número a la derecha. 4 < 7, 4 es menor que 7

Libros recomendados:

**Reeses’ Pieces Count By Fives** de Jeffrey Pallotta

**The Warlord’s Beads** de Virginia Walton Pilegard

**A Grain of Rice** de Helena Clare Pittman
Anticipation Guide
Place Value and Number Sense

Before you begin Chapter 1

• Read each statement.
• Decide whether you agree (A) or disagree (D) with the statement.
• Write A or D in the first column OR if you are not sure whether you agree or disagree, write NS (not sure).

<table>
<thead>
<tr>
<th>STEP 1 A, D, or NS</th>
<th>Statement</th>
<th>STEP 2 A or D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>There are three different ways to read and write numbers.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>176,900 written in expanded form is (100,000 + 70,000 + 60,000 + 900).</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>One hundred seventy-three thousand, two hundred written in standard form is 17,320.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Word form is the way in which you read a number.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>A place-value chart is helpful because it shows you the value of the digits in a number.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>On a place-value chart, a period is a group of four digits.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The numbers on a number line are in order from left to right.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>167,835 &gt; 167,834.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>The number line can help you to round a whole number.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Rounding is a form of estimation.</td>
<td></td>
</tr>
</tbody>
</table>

After you complete Chapter 1

• Reread each statement and complete the last column by entering an A (agree) or a D (disagree).
• Did any of your opinions about the statements change from the first column?
• For those statements that you mark with a D, use a separate sheet of paper to explain why you disagree. Use examples, if possible.
**Game**

**ROLL IT AGAIN!**

**Ready**

3–6 number cubes
Pencil and paper

**Set**

Make a chart on the paper with a column for each person. Roll individual number cubes to make numbers.

**GO!**

1. Have player 1 toss the number cubes. (However many you have chosen.)
2. Arrange the numbers to make the greatest number possible.
3. Retoss none, one, some, or all of the number cubes in order to try to create a greater number.
4. Have player 1 arrange the number cubes into his or her final number.
5. Follow steps 2–4 for each remaining player.
6. Award 3 points to the player with the greatest number. The player with the second greatest number receives 1 point for the round.
7. Repeat steps 1–6, adding each round’s points together. The game ends when one or more players reach a total score of 20 or more.
8. Play the game again, but this time use the number cubes to form the lowest number possible.
Reteach

Place Value Through Hundred Thousands

You can write numbers in different ways using words and digits. The place value chart below shows the value of each digit in the number 237,568. Below the chart, the number appears in standard form, word form, and expanded form.

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>ones</td>
</tr>
<tr>
<td>tens</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2 | 3 | 7 | 5 | 6 | 8 |

**Standard form** Uses digits: 237,568

**Word form** Uses words to write the number the way you say it:
Two hundred thirty-seven thousand, five hundred sixty-eight.

**Expanded form** Uses the place value of each digit to write the number: 200,000 + 30,000 + 7,000 + 500 + 60 + 8

Complete the expanded form of each number below.

1. 87,562 = 80,000 + ________ + 500 + ______ + 2
2. 431,281 = 400,000 + ________ + 1,000 + ______ + 80 + ______

Complete the chart by filling in the standard form and word form of each number:

<table>
<thead>
<tr>
<th>Standard Form</th>
<th>Expanded Form</th>
<th>Word Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. _________</td>
<td>100,000 + 20,000 + 600 + 40 + 9</td>
<td>______________</td>
</tr>
<tr>
<td>4. _________</td>
<td>300,000 + 30,000 + 8,000 + 200 + 30 + 7</td>
<td>______________</td>
</tr>
<tr>
<td>5. _________</td>
<td>500,000 + 10,000 + 3,000 + 400 + 60 + 1</td>
<td>______________</td>
</tr>
</tbody>
</table>
Skills Practice

Place Value Through Hundred Thousands

Write each number in standard form.

1. five hundred eighty-two thousand, nine hundred forty-seven.

2. two hundred six thousand, four hundred twenty-nine.

3. eight hundred thirty-four thousand, six hundred seventy-one.

Write each number in word form and expanded form.

4. 6,829

5. 23,741

6. 119,874

7. 745,293

Complete the expanded form.

8. 37,568 = 30,000 + ________ + 500 + ____ + 8

9. 493,236 = 400,000 + ____________ + 3,000 + ____ + 30 + __

10. 548,912 = 500,000 + ____________ + 8,000 + 900 + ____ + 2
Write each number in standard form.

1. three hundred twenty-six thousand, four hundred fifty-one.

2. one hundred forty-five thousand, two hundred thirty-seven.

Write each number in word form and expanded form.

3. 87,192

4. 413,750

Complete the expanded form.

5. 91,765 = 90,000 + _______ + 700 + ______ + 5

6. 798,054 = 700,000 + _______ + 8,000 + ______ + 4

Write the value of each underlined digit.

7. 645,802 ______

8. 271,385 ______

Divide. (Previous Grade)

9. 10 ÷ 2 ______

10. 16 ÷ 4 ______

11. 9 ÷ 3 ______

12. 25 ÷ 5 ______

13. 8 ÷ 1 ______

14. 36 ÷ 6 ______

15. 7)42 ______

16. 5)40 ______

17. 3)21 ______

18. 9)81 ______

19. 7)35 ______

20. 8)32 ______
Solve.

1. Michael says he has used 42,567 pencils since he started school. Maria wants to be sure she heard the number correctly. Write 42,567 in word form and in expanded form for Maria.

2. Emily and Inez found a treasure map that shows the location of gold coins. They want to show their friends how much gold they can find. Write the number in standard form. 200,000 + 70,000 + 4,000 + 600 + 90 + 3 __________

3. Javier and Nick want to start a dog-walking business after school. They made 1,236 flyers to hand out around their neighborhood. Write the number in word form and in expanded form.

4. Union Township has a population of 172,650. What is the value of the underlined digit? __________

5. Jan’s grandfather was a pilot. He estimates that he has flown 460,500 miles in his life. When Jan told her mother about this, Jan said 406,500 miles. Jan’s mother said she should get her numbers right. What mistake did Jan make? How can Jan fix it?

_______________________________

_______________________________
Read each riddle and write the answer in the form requested.

1. It is a three-digit number whose tens digit is 3. Its hundreds digit is 4 more than its ones digit, which is an odd number less than 5. No two digits are the same.
   Write it in standard form: ____________________________

2. It is the greatest even two-digit number. The product of its digits is 72.
   Write it in word form: ____________________________

3. It is the least four-digit number that can be rounded up to the nearest hundred as 4,100.
   Write it in expanded form: ____________________________

4. It is a four-digit number greater than 7,000. None of its digits are the same and all of them are even numbers. Its ones digit is 6 and the sum of its digits is 20.
   Write it in standard form: ____________________________

5. Both the sum and the product of its three digits are 6. The least digit is in the hundreds place and the greatest digit is in the ones place.
   Write it in word form: ____________________________
Reteach

**Place Value Through Millions**

Numbers can be written in different ways using words or digits. The place value chart below shows the value of each digit in the number 14,153,987. Below the chart, the number appears in standard form, word form, and expanded form.

<table>
<thead>
<tr>
<th>Millions Period</th>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>tens</td>
<td>ones</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

**Standard form** Uses digits to write a number: 14,153,987  
**Word form** Uses words to write a number the way you say it: Fourteen million, one hundred fifty-three thousand, nine hundred eighty-seven  
**Expanded form** Uses the place value of each digit to write the number: $10,000,000 + 4,000,000 + 100,000 + 50,000 + 3,000 + 900 + 80 + 7$

**Complete the chart.**

<table>
<thead>
<tr>
<th>Standard Form</th>
<th>Expanded Form</th>
<th>Word Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. _________</td>
<td>$7,000,000 + 300,000 + 50,000 + 6,000 + 200 + 30 + 7$</td>
<td>__________________</td>
</tr>
<tr>
<td>2. _________</td>
<td>$40,000,000 + 1,000,000 + 600,000 + 50,000 + 9,000 + 700 + 3$</td>
<td>__________________</td>
</tr>
<tr>
<td>3. _________</td>
<td>$200,000,000 + 30,000,000 + 5,000,000 + 90,000 + 1,000 + 500 + 60 + 8$</td>
<td>__________________</td>
</tr>
</tbody>
</table>
Skills Practice

Place Value Through Millions

Write each number in **standard form**.

1. four million, nine hundred twenty-seven thousand, two hundred fifteen
   ________________

2. ninety-seven million, two hundred fifty-three thousand, eight hundred twenty-five
   ________________

Write each number in **word form and expanded form**.

3. 275,364,819
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

4. 843,720,159
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Complete the **expanded form**.

5. 413,089,762 = 400,000,000 + ____________ + 3,000,000 + 80,000 + ______ + 700 + ____ + 2

6. 152,387,093 = 100,000,000 + ____________ + 2,000,000 + 300,000 + ______ + 7,000 + ____ + 3

7. 9,262,548 = 9,000,000 + ____________ + 60,000 + 2,000 + ______ + 40 + ____

Write the value of the underlined digit.

8. 1,283,479 __________

9. 50,907,652 __________

10. 20,735,823 __________

11. 318,472,008 ______________
Write each number in **standard form**.

1. four hundred thirty-two million, five hundred eighty-six thousand, six hundred twelve. __________
2. nine hundred fifty-seven million, two hundred four thousand, three hundred eighty-one. __________

Write each number in **word form** and **expanded form**.

3. 103,721,495

   __________
   ____________________________
   ____________________________
   ____________________________

4. 682,364,518

   __________
   ____________________________
   ____________________________
   ____________________________

Write the value of each underlined digit.

5. 561,754,908 __________
6. 498,749,013 __________
7. 7,020,154 __________
8. 398,216,045 __________

**Spiral Review**

Write the number in **standard form**. (Lesson 1-1)

9. two hundred forty-three thousand, seven hundred eighteen __________
10. six hundred ninety-five thousand, eighty-seven __________

Complete the **expanded form**.

11. 198,045 = 100,000 + 90,000 + ________ + 40 + ________
12. 982,105 = 900,000 + ________ + 2,000 + ________ + 5
Problem-Solving Practice
Place Value Through Millions

Solve.

1. Hannah read that 11,765,825 people saw the L.A. Lakers play last season. Chris wants to be sure he heard the number correctly. Write 11,765,825 in word form and in expanded form for Chris.

2. There are approximately \(200,000,000 + 90,000,000 + 8,000,000 + 800,000 + 60,000 + 9,000 + 500 + 2\) people living in the United States. Write the number in standard form.

3. Approximately 37,124,871 people live in California. Write the number in word form and in expanded form.

4. The pirate movie made $135,634,554 in one weekend. What is the value of the underlined digit?

5. American car makers produce 5,650,000 cars each year. In a report, Ben wrote that Americans made 6,550,000 cars. What mistake did Ben make? How can he fix it?
Use what you know about place value and telephone numbers to complete this chart.

<table>
<thead>
<tr>
<th>Telephone Number</th>
<th>Standard Form</th>
<th>Expanded Form</th>
<th>Word Form</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>7,000,000 + 300,000 + 10,000 + 5,000 + 800 + 80 + 2</td>
<td>Two million, six hundred thirty-seven thousand, four hundred twenty</td>
</tr>
<tr>
<td>905-9618</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Write your telephone number in standard form:

______________________________
The Four-Step Plan

If you want to solve a problem, it is important to have a plan. You can use the four-step plan to solve most problems. Use this exercise to learn more:

Miguel’s class is having a picnic. The class will make sandwiches at the picnic. There are 36 students in Miguel’s class and 18 slices of bread in a loaf. How many loaves of bread will Miguel’s class need for the picnic? (Hint: Each sandwich will have 2 slices of bread.)

**Step 1**
**Understand** What facts do you know? Miguel’s class has 36 students. There are 18 slices of bread in one loaf. What do you need to find? How many loaves of bread the class will need for the picnic.

**Step 2**
**Plan** You can divide the total number of slices in a loaf by the number of slices needed for a sandwich. Then divide the number of sandwiches needed by the number of sandwiches in a loaf.

**Step 3**
**Solve** 18 slices ÷ 2 slices of bread for each sandwich = 9 sandwiches in a loaf. Then divide 36 sandwiches by 9 sandwiches in a loaf. 36 ÷ 9 = 4. So, Miguel’s class will need 4 loaves of bread to make sandwiches for everyone at the picnic.

**Step 4**
**Check** Look back at the problem. One way to check the answer to this problem is to work backwards. How many slices of bread are in 4 loaves? 4 × 18 = 72. How many sandwiches does 72 slices of bread make? \( \frac{72}{2} = 36 \). So the answer is correct.
1–3

Reteach  (continued)

**Problem-Solving Strategy**

Solve. Use the *four-step plan*.

1. There are 30 students who want to play in a basketball tournament. The tournament needs to have 1 game ball for every two teams. If each team will have 5 players, how many basketballs will the tournament need?

2. Josh and Anthony have a lemonade stand. They sell 2 glasses of lemonade for $1. They sell 14 glasses each afternoon. How much money do Josh and Anthony make after 3 days of selling lemonade?

3. Jessica can ride her bike 3 blocks in 1 minute. It takes her twice as long to ride her bike 3 blocks if she carries her backpack. If her school is 12 blocks from her house, how long will it take her to get to school with a full backpack?

4. A group of friends needs to carry a large basket of books to the library. Kevin can carry the basket 5 feet. Rachel can carry it 3 feet farther than Kevin. Daniel can carry the basket half as far as Rachel. If each friend carries the basket 3 times, how far will they move the basket?
Skills Practice

Problem-Solving Strategy

Solve. Use the **four-step plan**.

1. Javier’s grandmother lives 120 miles away. It takes 1 hour to go 40 miles by train. How long will it take for Javier to get to his grandmother’s home by train?

2. The average fourth-grader at Jones Elementary School can complete 2 math problems in 1 minute. A teacher assigned 24 math problems for homework. How long will it take for each student to complete the homework?

3. Brittany wants to make cookies for the whole fourth grade. Her recipe makes 1 dozen cookies. There are 72 fourth-graders at her school. How many dozens of cookies does Brittany need to make for the whole grade?

4. Justin is paid $2 a week for doing chores around the house. He wants to buy a new football that costs $12. How many weeks will Justin have to save his money to buy the football?

5. Ryan and his four friends are planning to visit a zoo. Admission for children is $8. What is the total cost of admission for everyone to go to the zoo?
Solve. Use the four-step plan.

1. Luis can ride his bike to school three different ways. When he goes with Christina, it takes 22 minutes. When he goes with Devin, it takes 17 minutes. When he goes by himself, it takes 12 minutes. How much faster can Luis get to school when he rides by himself than with Christina?

2. Marissa wants to buy her brother a present. The store has a $10 soccer ball, a $9 baseball bat, an $18 baseball glove, a $13 tennis racket, and a $21 helmet. If Marissa has $15, which presents could she buy?

3. Inez can carry 2 bags of groceries into her home with each trip from the car. Her brother can carry the same amount. How many trips will it take them to carry 28 bags of groceries?

4. Carlos wants to go to Happy Land Park with 4 friends at the end of summer. Tickets are $18 for children. How much will it cost for Carlos and his friends to go to Happy Land Park?

Spiral Review

Write each number in standard form. (Lesson 1-2)

5. five hundred eighty-seven million, one hundred forty-two thousand, eight hundred sixty-six

6. one hundred twenty million, five hundred seventy-four thousand, two hundred seventy-five

Write the value of each underlined digit.

7. 316,113,276

8. 67,512,327
One million is a big number, and these are big questions. A good problem-solving plan and a calculator will help you find the answers.

1. About how many years old were you by the time you had lived a million minutes?

2. About how old would you be if you lived a million hours?

3. About how old would you be if you lived a million days?

4. About how old would you be if you lived a million weeks?

5. About how many months is a million weeks?

6. About how many years is a million months?
Reteach

Compare Whole Numbers

You compare numbers when you want to know if one number is less than, greater than, or equal to another number. You can use a number line or a place value chart to help you compare numbers. Compare 12,572 and 15,572.

Lesser numbers are on the left on a number line. Greater numbers are on the right.

12,572 is to the left of 15,572. So 12,572 < 15,572.

In a place value chart, you start at the left. Look for the first place where the digits are different to compare the numbers.

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>tens</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

The number 15,572 has more thousands than 12,572.

So 15,572 > 12,572.

Compare. Use >, <, or =.

1. 42,615 < 42,637
2. 13,982 < 13,874
3. 4,765 < 4,219
4. 8,097 < 8,790
5. 7,123 < 7,186
6. 5,835 < 5,083
7. 11,093 < 10,930
8. 13,771 = 13,781
9. 65,987 = 65,987
10. 81,092 > 81,902
11. 124,764 > 124,674
12. 245,718 > 247,518
13. 718,634 > 719,055
14. 3,870,762 > 3,780,763
1–4

Skills Practice

Compare Whole Numbers

Compare. Use >, <, or =.

1. 1,276  1,267
8. 38,087  37,088
2. 1,589  1,587
9. 67,982  67,892
3. 2,235  2,325
10. 100,542  105,042
4. 4,672  4,670
11. 165,982  178,983
5. 8,902  8,912
12. 239,742  289,650
6. 10,321  10,231
13. 563,218  652,985
7. 14,832  14,872
14. 1,986,034  1,896,075
15. two hundred fifty-two thousand, nine hundred eighty-five  252,895
16. 300,000 + 60,000 + 2,000 + 300 + 10 + 7  364,375
17. five hundred thousand, nine hundred twenty-seven  500,000 + 900 + 20 + 7
18. 621,743  six hundred twenty thousand, seven hundred fifty-nine
19. 14,210,312  forty million, two hundred thousand, seventy-five

Solve.

20. Jorge has 1,325 baseball cards in his collection. Sam wants to have more cards than Jorge by the end of summer. Sam collects 1,297 cards. Who has more cards?

21. Andrea read that New York City has 8,008,278 people and that Seoul, South Korea has 10,231,217 people. Andrea wants to live in the city with the most people. Where does Andrea want to live?
Compare. Use >, <, or =.

1. 1,347 \[\text{〇}\] 1,317
2. 5,781 \[\text{〇}\] 5,872
3. 8,091 \[\text{〇}\] 8,901
4. 11,654 \[\text{〇}\] 1,654
5. 77,215 \[\text{〇}\] 77,215
6. 97,604 \[\text{〇}\] 96,407
7. 111,280 \[\text{〇}\] 112,800
8. 234,582 \[\text{〇}\] 23,458
9. 366,438 \[\text{〇}\] 366,843
10. 672,809 \[\text{〇}\] 672,809
11. 702,593 \[\text{〇}\] 702,359
12. 894,710 \[\text{〇}\] 89,470
13. 1,436,721 \[\text{〇}\] 1,346,721
14. 23,086,543 \[\text{〇}\] 23,806,543
15. 527,308,516 \[\text{〇}\] 523,708,500
16. fifty-two thousand, four hundred sixty-seven \[\text{〇}\] 502,467
17. 800,000 + 60,000 + 400 + 60 + 2 \[\text{〇}\] 97,642
18. four million, two hundred twelve thousand, thirty-two \[\text{〇}\]
   + 4,000,000 + 9,000 + 50 + 9
19. 6,821,054 \[\text{〇}\] sixteen million, five hundred twelve thousand, eight hundred fourteen

Solve. (Lesson 1-3)

20. Jake delivers 234 newspapers a week. Miranda delivers 477 newspapers a week. How many more newspapers does Miranda deliver than Jake?
Solve.

1. Charles is moving from Springfield, which has 482,653 people, to Greenville, which has 362,987. Is he moving to a larger or smaller city? Explain.

2. The Denver Mint made 2,638,800 pennies. The Philadelphia Mint made 2,806,000 pennies. Which mint made more pennies?

3. About 450,000 people lived in Maryville in 2000. In 2005, about 467,000 people lived in Maryville. Did the number of people living in Maryville get larger or smaller?

4. In 1950, bike stores sold about 205,850 bikes. In 2000, bike stores sold about 185,000 bikes. Is the number of bikes being sold getting larger or smaller?

5. In 2000, about 290,000,000 cans of soda were sold each day. In 1970, about 65,000,000 cans were sold each day. Were more cans of soda sold in 2000 or 1970? Explain.

6. Allison found out that the average American works about 2,100 hours a year. The average French worker works about 1,650 hours a year. Who works more hours?
Read each question. Then write your answers on the lines provided.

1. How many different three-digit numbers can you make using 1, 2, and 3 as digits?

2. From least to greatest, write all of the three-digit numbers you can make using the digits 1, 2, and 3.

3. How many different three-digit numbers can you make using 4, 5, and 6 as digits?

4. From least to greatest write all of the three-digit numbers you can make using the digits 4, 5, and 6.

5. Write the greatest and least numbers you can make using all four of these digits: 0, 3, 5, 7

Use the signs >, <, and = to compare the values below.

6. \((2 + 4)\) \(\bigcirc\) \((4 + 2)\)

7. \((5 - 3)\) \(\bigcirc\) \((5 + 3)\)

8. \((5 + 8)\) \(\bigcirc\) \((10 + 1)\)

9. \((9 - 6)\) \(\bigcirc\) \((5 - 1)\)

10. \((20 - 4)\) \(\bigcirc\) \((12 + 12)\)

11. \((12 + 5)\) \(\bigcirc\) \((9 + 8)\)

12. \((10 - 5)\) \(\bigcirc\) \((9 - 7)\)

13. \((13 - 7)\) \(\bigcirc\) \((8 + 6)\)

14. \((15 + 3)\) \(\bigcirc\) \((7 + 8)\)

15. \((11 - 3)\) \(\bigcirc\) \((3 + 4)\)
Order Whole Numbers

Order the numbers from greatest to least: 9,245; 6,082; 8,970; 5,329.
You can use a number line or a place value chart to help you order numbers.

Once you place the numbers where they belong on a number line, you can see their order.

In a place value chart, you start at the left. Look for the first place where the digits are different to compare the numbers. Continue through each place value until you have ordered all the numbers.

The number 9,245 has more thousands than all the other numbers. It is the greatest. 5,329 has the least thousands, so it is the least.

**Order the numbers from greatest to least.**

1. 1,287; 1,509; 1,487; 1,111

2. 4,278; 5,761; 4,390; 5,104

3. 7,861; 10,865; 9,200; 8,923
Order the numbers from **greatest to least**.

1. 1,209; 1,078; 1,165; 1,318

2. 5,982; 6,237; 7,892; 4,163

3. 27,982; 32,563; 34,138; 29,238

4. 65,201; 64,827; 66,482; 63,621

Order the numbers from **least to greatest**.

5. 8,362; 8,435; 8,920; 8,231

6. 38,271; 37,462; 30,256; 34,247

7. 278,623; 265,023; 281,426; 252,917

8. 4,293,046; 4,308,261; 4,287,460; 4,260,658

9. 57,294,601; 58,925,462; 55,281,473; 56,024,482

**Solve.**

10. The all-county track meet was Friday. Below are the times for the fastest 1-mile runs. The coaches need help figuring out who gets the second place ribbon. Order these race times from least to greatest.

   Brianna: 362 seconds  
   Lauren: 365 seconds  
   Rachel: 358 seconds  
   Danielle: 370 seconds

   Whose time was the second least in seconds?
Order the numbers from greatest to least.

1. 5,827; 5,628; 5,835; 5,725

2. 17,472; 18,451; 19,629; 17,784

3. 34,893; 37,230; 29,167; 38,173

4. 273,280; 267,902; 275,784; 270,562

5. 478,024; 478,165; 475,907; 477,281

Solve.

6. Christine is writing a report about the world’s largest animals. Order these animals by weight from greatest to least to help her decide which animal to write about first.
   Blue whale: 418,878 lb  African elephant: 11,023 lb
   White rhinoceros: 4,850 lb  Indian elephant: 8,818 lb

7. Nicole wants to learn more about the islands of the world. Order these islands from greatest to least.
   Borneo  287,300 mi  Madagascar  227,000 mi
   New Guinea  309,000 mi  Greenland  839,999 mi

Spiral Review

Compare. Use >, <, or =. (Lesson 1-4)

8. 907,654  987,421

9. 1,235,903  1,237,903
Problem-Solving Practice
Order Whole Numbers

Solve.

1. For the state high school basketball tournament, the teams are divided into groups based on the size of their high school. Order these high schools from most students to least. Then name the two teams that are from the largest high schools.

<table>
<thead>
<tr>
<th>School</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont</td>
<td>2,759</td>
</tr>
<tr>
<td>Jefferson</td>
<td>2,341</td>
</tr>
<tr>
<td>Kingsville</td>
<td>1,865</td>
</tr>
<tr>
<td>La Plata</td>
<td>2,056</td>
</tr>
</tbody>
</table>

2. Madison wants to know which sports are most popular in California. She reads a list that shows how many kids play each sport. Order the sports from most players to least to help show Madison which sports are popular.

<table>
<thead>
<tr>
<th>Sport</th>
<th>Players</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soccer</td>
<td>3,875,026</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>900,765</td>
</tr>
<tr>
<td>Surfing</td>
<td>250,982</td>
</tr>
<tr>
<td>Basketball</td>
<td>2,025,351</td>
</tr>
</tbody>
</table>

3. Tyler wondered how many people voted in the United States Presidential elections. He wants to know which year had the fewest voters in the last four elections. Order the election years from least to greatest number of voters.

<table>
<thead>
<tr>
<th>Year</th>
<th>Voters</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>122,295,345</td>
</tr>
<tr>
<td>2000</td>
<td>105,586,274</td>
</tr>
<tr>
<td>1996</td>
<td>96,456,345</td>
</tr>
<tr>
<td>1992</td>
<td>104,405,155</td>
</tr>
</tbody>
</table>

4. Rosa’s science teacher challenged the class to reduce the amount of electricity they used. First, students needed to find out how much they were using. Order the students from who used the most electricity to who used the least.

<table>
<thead>
<tr>
<th>Name</th>
<th>kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosa</td>
<td>3,056</td>
</tr>
<tr>
<td>Austin</td>
<td>3,125</td>
</tr>
<tr>
<td>Anna</td>
<td>3,098</td>
</tr>
<tr>
<td>Robert</td>
<td>3,105</td>
</tr>
</tbody>
</table>
George and Kate, who live in Dallas, Texas, are planning a road trip to visit five cities in the United States. George used an atlas to find the distance between Dallas and their first stop in Atlanta, Georgia. He wrote down that distance as 781 miles. Then he quickly jotted down these notes about other distances — 629, 233, 938, 2034, and 1729.

Based on George’s notes, decide what route you think they will follow for their road trip. Write the names of the cities in the order you think George and Kate will visit them before returning home.

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________
5. ____________________________

How did you decide on that order?

______________________________
______________________________

Enrich

Road Trip
**Reteach**

**Round Whole Numbers**

Round the number 14,682 to the nearest hundred.

A number line helps you round by showing you which number is closer to the number you are rounding. 14,682 is between 14,600 and 14,700. It is closer to 14,700. You round to 14,700.

![Number line showing 14,682 between 14,600 and 14,700]

Place value helps you round by showing you which digit to round.

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>tens</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

- Find place value to be rounded. (hundreds)
- Look at digit to the right of the place you are rounding. (tens)
- Round up, or add 1 to the place you are rounding, if the digit to the right is 5 or greater. Round down, or add 0 to the place you are rounding, if the digit is less than 5. (digit is 8; round up)
- Replace all digits after the place you are rounding with zeros. (14,700)

**Round each number to the given place-value position.**

1. 657; hundred ______
2. 843; hundred ______
3. 2,190; thousand ______
4. 7,841; thousand ______
5. 15,834; ten thousand ______
6. 33,512; ten thousand ______
7. 243,713; hundred thousand ______
8. 687,351; hundred thousand ______
9. 537,820; ten thousand ______
10. 274,871; ten thousand ______
11. 2,763,640; thousand ______
12. 6,380,639; thousand ______

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Skills Practice

Round Whole Numbers

Round each number to the given place-value position.

1. 482; ten ______  
2. 747; ten ______  
3. 261; hundred ______  
4. 375; hundred ______  
5. 1,278; hundred ______  
6. 3,568; hundred ______  
7. 4,763; thousand ______  
8. 5,432; thousand ______  
9. 12,854; thousand ______  
10. 35,709; thousand ______  
11. 42,981; ten thousand ______  
12. 78,651; ten thousand ______  
13. 267,430; hundred thousand ______  
14. 449,843; hundred thousand ______  
15. 1,652,804; hundred thousand ____________  
16. 2,398,526; hundred thousand ____________  
17. 4,875,062; ten thousand ____________  
18. 12,392,604; thousand ____________  

Solve.

19. The Environmental Protection Agency says the Mississippi River is 2,320 miles long. The U.S. Geological Survey says it is 2,300 miles long. Rounded to the nearest hundred, are these two numbers about the same? Explain. ____________________________________________  

20. The state of California has a land area of 163,692 square miles. Montana has a land area of 147,042 square miles. Rounded to the nearest ten thousand, are the two states’ areas the same? Explain. ____________________________________________  

21. Rounding to the hundreds place, Devin has to score about 200 points to make the traveling basketball team. He has scored 135 points so far. How many more points will he need to score to make the team? Explain. ________________
Round each number to the given place-value position.

1. 623; ten _____
2. 435; ten _____
3. 581; hundred _____
4. 870; hundred _____
5. 1,302; hundred _____
6. 1,447; hundred _____
7. 2,398; thousand ______
8. 4,628; thousand ______
9. 23,876; thousand ______
10. 31,098; thousand ______
11. 44,872; ten thousand ______
12. 65,281; ten thousand ______
13. 124,830; ten thousand ______
14. 237,524; hundred thousand ______
15. 497,320; hundred thousand ______
16. 1,567,438; hundred thousand ______
17. 2,802,746; hundred thousand _______
18. 3,458,321; thousand ____________
19. 4,872,018; ten thousand __________
20. 6,873,652; thousand ____________

Solve.

21. There are 572 beans in the jar. Carolina guesses there are 600 beans in the jar. Steven estimates there are 500 beans in the jar. Rounding to the nearest hundred, who estimated correctly?

Order from **greatest to least.** (Lesson 1-5)

22. 564; 623; 276

23. 3,560; 3,542; 3,498; 3,589

24. 64,890; 65,032; 64,217; 64,578

25. 213,093; 212,764; 213,570; 213,435
Problem-Solving Practice

Round Whole Numbers

Solve.

1. Taipei 101 in Taiwan is 1,673 feet tall. How tall is this building when rounded to the nearest hundred? the nearest thousand?

2. The Golden Gate Bridge spans about 4,224 feet. Brian says the bridge spans about 4,000 feet. Samantha says it spans about 4,200 feet. Their teacher says they are both correct. How is this possible?

3. The Lake Mead reservoir at the Hoover Dam covers 157,900 acres. How large is Lake Mead rounded to the nearest hundred thousand?

4. Ricardo estimates there are 10,000 balls in the ball pit at the park. His father helps him count the 12,345 balls. Is Ricardo’s estimate good if he rounds to the nearest ten thousand? Is it good if he rounds to the nearest thousand? Explain.

5. Experts estimate that there are 500,000 leopards living in the wild. If we were able to count all the leopards and found 527,863 leopards, would the 500,000 estimate be a good estimate? Explain.

6. Gabriella has 15,467 coins she has collected from around the world. Her friends asked her about how many coins were in her collection. What would be a good answer for her to tell them? Explain.
Enrich

Pasta Challenge

Millions of boxes of pasta were sold in the United States in 2005. This report rounds unit sales to the nearest hundred thousand. Read the report and place a checkmark (√) next to each sentence that could be true.

<table>
<thead>
<tr>
<th>Pasta</th>
<th>Unit Sales (to the nearest hundred thousand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaghetti</td>
<td>74,800,000</td>
</tr>
<tr>
<td>Macaroni</td>
<td>45,600,000</td>
</tr>
<tr>
<td>Fettuccini</td>
<td>50,800,000</td>
</tr>
<tr>
<td>Spiral</td>
<td>26,900,000</td>
</tr>
<tr>
<td>Angel Hair</td>
<td>13,700,000</td>
</tr>
</tbody>
</table>

[source: Information Resources, Inc.]

1. More than 75 million Americans bought a box of spaghetti pasta in 2005.
√

2. At least 13,650,000 boxes of angel hair pasta were sold.

3. Fewer than 45,650,000 boxes of Macaroni pasta were purchased.

4. Total sales for spiral pasta and angel hair pasta were less than 40,000,000 units.

5. The actual number of boxes of Fettuccini pasta sold was 50,782,693.
Sometimes you can solve a problem using more than one strategy. You must choose the strategy that works best for you.

**Use this problem to learn more about choosing a strategy:**

Sam has 3 shirts to give to his friends. Each friend has one favorite color that is either red, blue, or green. Michelle does not like red or green. Ben does not like blue or red. Lindsey likes red. Who likes green?

<table>
<thead>
<tr>
<th>Understand</th>
<th>You know there are three friends: Michelle, Ben, and Lindsey. You know there are three shirts: red, blue, and green. You need to find out who likes green.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>Choose a strategy. You have information about three people, but some information is missing for each person. A table is a good way to show what information you have and what information is missing. Make a table to solve the problem.</td>
</tr>
<tr>
<td>Solve</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red</td>
</tr>
<tr>
<td>Michelle</td>
<td>No</td>
</tr>
<tr>
<td>Ben</td>
<td>No</td>
</tr>
<tr>
<td>Lindsey</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Since each friend has only one favorite color, you can fill in the rest of the information for each friend. Ben is the friend who likes green.

<table>
<thead>
<tr>
<th>Check</th>
<th>Look back at the problem. Does the chart show one favorite color for each friend?</th>
</tr>
</thead>
</table>

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Use any strategy shown below to solve. Tell which one you used.

- Use the four-step plan
- Look for a pattern
- Draw a picture
- Make a table

1. Alejandro collected bugs for a science project. He has a painted lady butterfly, a monarch butterfly, a bumble bee, a lime butterfly, a honey bee, a speckled wood butterfly, a carpenter bee, and a plum Judy butterfly. Did he collect more bees or butterflies?

2. Isaiah is growing his dog-walking business. The first week he walked 1 dog. The second week he walked 2 dogs. The third week he walked 3 dogs. If this pattern continues, how many dogs will Isaiah walk the seventh week?

3. Carlos lives 2 blocks west of Kimberly. Elizabeth lives 2 blocks east of Kimberly. How far does Elizabeth live from Carlos?

4. Kelly earns $5 every time she washes her neighbor’s car. How many times will she need to wash the car to earn $45?
Skills Practice
Problem-Solving Investigation

Use any strategy shown below to solve. Tell which one you used.

- Use the four-step plan
- Look for a pattern
- Draw a picture
- Make a table

1. A cheetah can run 70 miles in one hour. A rabbit can run 35 miles in one hour. How many hours would it take a rabbit to run as far as a cheetah can run in 2 hours?

2. Mrs. Jones said the class could decide what game they played this afternoon. The class listed these games: four square, basketball, kickball, four square, kickball, soccer, four square, basketball, four square. Which game should the class play?

3. Cameron says he runs about 4 miles when he plays a soccer game. Last week he ran about 12 miles. How many soccer games did he play?

4. The zoo is 5 miles from Katie’s house. Her school is 2 miles farther. Katie’s grandmother lives another 3 miles past her school. How far away is Katie’s grandmother’s house from Katie’s house?

5. Courtney can make 5 bracelets a week. She wants to make one for each girl in her class. If there are 17 girls in her class, how many weeks will it take her to make the bracelets?

6. Zack has 4 younger brothers. Zack is 54 inches tall. The next oldest, James, is 52 inches tall. The next oldest, Kyle, is 50 inches tall. The next oldest, Thomas, is 48 inches tall. If the pattern continues, how tall is the youngest brother, Andrew?
1. Alexis and Tyler are getting a dog. They like labradors, golden retrievers, and dalmatians. Their mother said they can get the smallest dog. The average labrador is 70 pounds. The average golden retriever is 65 pounds. The average dalmatian is 55 pounds. Which dog will Alexis and Tyler get?

2. Marisol sells candy bars to raise money for her softball team. Each day she sells more. The first day she sells 5. The second day she sells 6. The third day she sells 8. The fourth day she sells 11. The fifth day she sells 15. The sixth day she sells 20. How many will she sell on the tenth day?

3. Erica was searching for her sunglasses. She walked 2 blocks north, 3 blocks south, 4 blocks east, and 3 blocks west. How many blocks did she walk? How far is Erica from where she began her search?

4. Paige and her 3 friends want to go to the movies on Saturday. If tickets are $6 each, how much will it cost for all 4 friends to go to the movies?

5. Round each number to the given place-value position. (Lesson 1-6)
   - 4,563; hundred
   - 7,412; hundred
   - 12,763; thousand
   - 67,924; ten thousand
   - 137,654; ten thousand
   - 472,917; hundred thousand
   - 2,348,915; thousand
   - 4,712,634; ten thousand
If you like to fidget with digits, then here’s a problem for you.

Write the digits 1 through 9 on nine separate scraps of paper.

How many ways can you make 3 piles of 3 digits whose sums add up to the numbers on each square below?

13

15

17
Read each question carefully. Write your answer on the line provided.

1. What is the standard form of 8 thousands 8 tens 3 ones?
   A. 8,883       B. 8,083       C. 8,003       D. 8,183   1. ____

2. Order from least to greatest: 356, 373, 365, 386
   F. 356, 365, 386, 373       G. 373, 386, 356, 365
   H. 365, 373, 386, 356       J. 356, 365, 373, 386   2. ____

3. Round 3,476 to the nearest 10.
   A. 3,470       B. 3,460       C. 3,480       D. 3,400   3. ____

4. \(376 + 321 + 398 = \) 
   F. 1,095       G. 1,025       H. 1,145       J. 1,096   4. ____

5. \(641 - 98 = \) 
   A. 739       B. 543       C. 534       D. 532   5. ____

6. \$41.84 - \$39.96 = \) 
   F. \$1.99       G. \$1.39       H. \$1.88       J. \$2.98   6. ____

7. If it is now 9:15 A.M., what time will it be in an hour and forty-five minutes?
   A. 11:00 A.M.       B. 10:00 A.M.       C. 10:45 A.M.       D. 12:00 A.M.   7. ____

8. \(8 \times 4 = \) 
   F. 35       G. 32       H. 24       J. 36   8. ____

9. \(7 \times \) = 21
   A. 2       B. 4       C. 3       D. 5   9. ____

10. \(4 \times 3 \times 2 = \) 
    F. 12       G. 24       H. 14       J. 9   10. ____

11. Which multiplication sentence is related to this division sentence?
   \(35 \div 5 = 7\)
   A. \(7 + 5 = 12\)       B. \(5 \times 7 = 35\)
   C. \(7 \times 3 = 21\)       D. \(7 \times 3 = 35\)   11. ____
12. $36 \div 9 = \boxed{\phantom{0}}$
   \[ \text{F. 5} \quad \text{G. 4} \quad \text{H. 6} \quad \text{J. 3} \]  
13. $64 \div 8 = \boxed{\phantom{0}}$
   \[ \text{A. 7} \quad \text{B. 9} \quad \text{C. 8} \quad \text{D. 4} \]  
14. $452 \div 6 = \boxed{\phantom{0}}$
   \[ \text{F. 85 R 2} \quad \text{G. 76 R 4} \quad \text{H. 76 R 2} \quad \text{J. 75 R 2} \]  
15. What is the area of the square?
   
   \[
   \begin{array}{cccc}
   & & & \hline
   & & & \\
   & & & \\
   & & & \\
   \hline
   & & & \\
   & & & \\
   & & & \\
   \hline
   & & & \\
   & & & \\
   & & & \\
   \end{array}
   \]
   \[ \text{A. 20 square units} \quad \text{B. 22 square units} \quad \text{C. 24 square units} \quad \text{D. 25 square units} \]  
16. Identify the figure.
   
   \[
   \text{F. pyramid} \quad \text{G. cylinder} \quad \text{H. cube} \quad \text{J. sphere}
   \]
17. Jasmine bought a 3-pound bag of peanuts. How many ounces is that?
   \[ \text{A. 8} \quad \text{B. 16} \quad \text{C. 32} \quad \text{D. 48} \]  
18. Which is a reasonable temperature for a hot summer day?
   \[ \text{F. 92°F} \quad \text{G. 90°C} \quad \text{H. 44°F} \quad \text{J. 32°F} \]  
19. $\frac{3}{5} + \frac{1}{5} = \boxed{\phantom{0}}$
   \[ \text{A. 1}\frac{2}{5} \quad \text{B. } \frac{4}{5} \quad \text{C. 1} \quad \text{D. } \frac{2}{5} \]  
20. $\frac{6}{7} - \frac{2}{7} = \boxed{\phantom{0}}$
   \[ \text{F. } \frac{3}{7} \quad \text{G. } \frac{1}{2} \quad \text{H. } \frac{4}{7} \quad \text{J. } 1\frac{1}{7} \]
1

Individual Progress Checklist

<table>
<thead>
<tr>
<th>B</th>
<th>D</th>
<th>S</th>
<th>Goal</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Read and write whole numbers to millions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Compare and order whole numbers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Round whole numbers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use the four-step plan to solve problems.</td>
<td></td>
</tr>
</tbody>
</table>

Notes

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
Write each number in word form and expanded form.

1. 89
   ______________________________________________________________________

2. 71
   ______________________________________________________________________

3. 153
   ______________________________________________________________________

4. 422
   ______________________________________________________________________

5. 590
   ______________________________________________________________________

6. 60
   ______________________________________________________________________

7. 1,035
   ______________________________________________________________________

8. 9,217
   ______________________________________________________________________

Compare. Use >, <, or =.

9. 30 3
   ______________________________________________________________________

10. 39 39
    _____________________________________________________________________

11. 325 356
    _____________________________________________________________________

Round to the nearest ten.

12. 36 __________
    ______________________________________________________________________

13. 88 __________
    ______________________________________________________________________

14. 122 __________
    ______________________________________________________________________

15. San Francisco, California is 75 miles from Santa Cruz, California. Would it be accurate to say that San Francisco is about 80 miles from Santa Cruz?
Chapter Pretest

Write each number in word form and expanded form.
1. 4,182
   _______________________________________________________________________
   _______________________________________________________________________
2. 34,231
   _______________________________________________________________________
   _______________________________________________________________________
3. 892,766
   _______________________________________________________________________
   _______________________________________________________________________

Write each number in standard form.
4. four hundred sixty-five ______
5. sixteen thousand, nine hundred ninety-nine ____________
6. three thousand, six hundred twenty ____________

Write each number in word form and standard form.
7. 2,000 + 300 + 9
   _______________________________________________________________________
8. 50,000 + 4,000 + 90 + 1
   _______________________________________________________________________
9. 300 + 50 + 8
   _______________________________________________________________________

Write the value of the underlined digit.
10. 59 _____
11. 790 _____
12. 1,366 ________
Read each question carefully. Write your answer in the space provided.

1. Write the standard form of eight hundred twenty-seven million, two hundred fifty-one thousand, six hundred fourteen. _________________

2. Write the expanded form of the same number.

____________________________________

3. Write the word form of this number: 972,731,308

____________________________________

4. What is the value of the underlined digit in this number:

87,092,416 _____________

5. Write the word form of this number: 100,000 + 70,000 + 300 + 60 + 1 _________________

6. What is the value of the underlined digit in this number: 5,873,912 _____________

7. Rosa wrote the number 321,875,098 on her paper. Then she wrote it in expanded form, but forgot to write one of the numbers. What is the missing number? 321,875,098 = 300,000,000 + _________________ + 1,000,000 + 800,000 + 70,000 + 5,000 + 90 + 8

8. A pedometer counts how many steps you take during your day. Doctors recommend we take 10,000 steps a day to keep active. Juan walked 276,432 steps in October. He walked 2,000 more steps in November. How many steps did he walk in November? _________________

<table>
<thead>
<tr>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>27</td>
</tr>
</tbody>
</table>
**Quiz 2 (Lessons 1-3 through 1-4)**

**Compare. Use >, <, or =.**

1. 35,981  
   36,127

2. 407,654  
   407,653

3. one million, two hundred forty-three thousand, five hundred  
   1,204,500

4. two hundred eight thousand, eighteen  
   208,018

**Complete to make the number sentence true.**

5. 12,021 > 12,02____

6. 425,890 < 425,_____90

7. 1,234,765 = 1,2_____4,765

8. 567,345 < _____00,000

**Solve. Use the four-step plan.**

9. There are 25 students in each classroom at Mary’s school. If all  
   8 classrooms had recess at one time, how many students would  
   be on the playground?

10. Adam is bringing donuts to class this week. His class has  
    32 students and 1 teacher. How many dozens of donuts will he  
    need to bring so everyone can have 1 doughnut?

11. Becky is allowed to watch 30 minutes of television every day  
    except Sunday. How many hours of television could she watch in  
    a week?

12. Edmund has to write 28 thank-you cards for his birthday gifts. The  
    thank-you cards come in boxes of 10. Each box costs $3. How  
    much will he spend on thank-you cards?
Quiz 3 (Lessons 1-5 through 1-7)

Order the numbers from greatest to least.

1. 7,543; 7,312; 7,697; 7,825

2. 37,320; 38,002; 37,976; 37,999

3. 524,867; 547,890; 532,410; 520,073

Round each number to the given place-value position.

4. 362,875; thousands

5. 642,291; hundred thousand

6. 56,832,056; ten thousand

Use any strategy shown below to solve.

- Use the four-step plan
- Draw a picture
- Look for a pattern
- Make a table

7. Aaron can say his telephone number 7 times on his favorite roller coaster ride. If he said his telephone number 42 times today, how many times did he ride his favorite roller coaster?

8. The ice cream shop is trying to decide which flavor is most popular. This week they sold 78 mint-chocolate-chip scoops, 87 chocolate scoops, and 47 vanilla scoops. Which flavor is the most popular?

9. Marcia takes riding lessons at a stable with 5 horses. Each horse needs a saddle, 2 feeding bags, and 4 horseshoes. How many items are needed for all of the horses?
Mid-Chapter Review (Lessons 1-1 through 1-4)

Read each question carefully. Write your answer on the line provided.

1. Which of these is the word form of 365,042?
   A. Thirty-six thousand, five hundred forty-two
   B. Three hundred sixty thousand, five hundred forty-two
   C. Three hundred sixty-five thousand, forty-two
   D. Three hundred sixty-five thousand, four hundred two

2. There are one hundred seven million, twenty-nine thousand people in Mexico. What is this number in standard form?
   F. 107,290,000
   G. 107,029,000
   H. 100,729,000
   J. 100,700,029

3. Noah earns $6 an hour babysitting. How much will he earn if he works for 3 hours?
   A. $6
   B. $12
   C. $18
   D. $24

4. Write each of the following in standard form and word form.
   300,000 + 20,000 + 700 + 40 + 9
   ____________________________
   ____________________________

5. 40,000,000 + 2,000,000 + 10,000 + 2,000 + 500 + 30 + 4
   ____________________________
   ____________________________

Write the value of the underlined digit.

6. 87,651,092
   7. 54,102,478

Solve. Use the four-step plan.

8. Jared’s favorite song is 4 minutes long. If he plays the song over and over 12 times, how long will he listen to this song?

9. Each flight of stairs in Alicia’s building has 13 steps. She lives on the fifth floor. If she enters from the first floor, how many steps does Alicia walk up when she comes home from school?
Using the words in the word bank, complete each sentence to make a true statement.

| estimate | is equal to (=) |
| round | expanded form |
| is less than (<) | digit |
| place value | number line |
| standard form | is greater than (>)

1. 5,689 _________________ 5,896.

2. When you change the value of a number to one that is easier to work with, you _______ that number.

3. 300 + 50 + 2 is an example of ________________.

4. A symbol used to write numbers is a(n) ________.

5. The value given to a digit by its position in a number is its ________________.

6. A line that represents numbers as points is a(n) ________________.

7. 5,672 _________________ 5,627.

8. The usual way of writing a number that shows only its digits, no words, is ________________.

9. A number close to an exact value that indicates about how much is a(n) ________________.

10. When the first number has the same value as the second number, the first number _________________ the second number.
Write these numbers on index cards in large digits: 236; 1,409; 3,478; and 23,990. On a separate piece of paper, copy this chart:

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>tens</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Read each question aloud to the student. Then write the student’s answers on the lines below the question.

Show the student the index card with 236 written on it. Ask:

1. What is this number?

2. Using the place value chart to help you, which digit in 236 is in the tens place?

3. Which digit is in the hundreds place?

4. In this number, 6 has what place value?

Show the student the index card with 1,409 written on it.

5. What is this number?

6. Using the place value chart to help you, which digit in 1,409 is in the tens place?

7. Which digit is in the hundreds place?

8. In this number, 1 has what place value?
Show the student with the card with 3,478 written on it. Ask:

9. What is this number?

10. Using the place value chart to help you, which digit in 23,990 is in the thousands place?

11. Which digit is in the hundreds place?

12. In this number, 0 has what place value?

13. If you added 9 to this number, what digit would be in the ones place?

14. Put the cards with the numbers written on them in order from least to greatest. What is the least number?

15. What is the greatest number?
# Chapter Project Rubric

<table>
<thead>
<tr>
<th>Score</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Student successfully completed the chapter project. Student demonstrated appropriate use of chapter information in completing the chapter project.</td>
</tr>
<tr>
<td>2</td>
<td>Student completed the chapter project with partial success. Student partially demonstrated appropriate use of chapter information in completing the chapter project.</td>
</tr>
<tr>
<td>1</td>
<td>Student did not complete the chapter project or completed it with little success. Student demonstrated very little appropriate use of chapter information in completing the chapter project.</td>
</tr>
<tr>
<td>0</td>
<td>Student did not complete the chapter project. Student demonstrated inappropriate use of chapter information in completing the chapter project.</td>
</tr>
</tbody>
</table>
# Chapter Foldables Rubric

**Concept Map Foldables**  
**Place Value and Number Sense**

<table>
<thead>
<tr>
<th>Score</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| 3     | Student properly assembled Foldables according to instructions.  
Student recorded information related to the chapter in the manner directed by the Foldables.  
Student used the Foldables as a study guide and organizational tool. |
| 2     | Student exhibited partial understanding of proper Foldables assembly.  
Student recorded most but not all information related to the chapter in the manner directed by the Foldables.  
Student demonstrated partial use of the Foldables as a study guide and organizational tool. |
| 1     | Student showed little understanding of proper Foldables assembly.  
Student recorded only some information related to the chapter in the manner directed by the Foldables.  
Student demonstrated little use of the Foldables as a study guide and organizational tool. |
| 0     | Student did not assemble Foldables according to instructions.  
Student recorded little or no information related to the chapter in the manner directed by the Foldables.  
Student did not use the Foldables as a study guide and organizational tool. |
Chapter Test, Form 1

Read each question carefully. Write your answer on the line provided.

1. Round 128,124 to the nearest thousand.
   A. 128,100   B. 127,000   C. 130,000   D. 128,000
   1. ___

2. Order from greatest to least. 31,114; 31,600; 30,533
   F. 30,533; 31,114; 31,600   G. 31,114; 30,533; 31,114
   H. 31,600; 31,114; 30,533   J. 31,600; 31,114; 30,533
   2. ___

3. Order from least to greatest. 11,679; 10,850; 12,039
   A. 11,679; 12,039; 10,850   B. 10,850; 12,039; 11,679
   C. 12,039; 10,850; 11,679   D. 10,850; 11,679; 12,039
   3. ___

4. What is the standard form of fifty-six million, thirty-three thousand?
   F. 56,033,000   G. 56,300,000
   H. 56,303,000   J. 56,330,000
   4. ___

5. What is the standard form of 900,000 + 600 + 80 + 2?
   A. 9,682   B. 900,682
   C. 906,082   D. 900,000,682
   5. ___

6. Write the number 2,046,701 in word form.
   F. two million, four hundred-six thousand, seven hundred one
   G. two million, forty-six thousand, seventy-one
   H. two million, forty-six thousand, seven hundred one
   J. two million, forty-six thousand, seven hundred ten
   6. ___

7. What is the expanded form of 73,011?
   A. 70,000 + 3,000 + 100 + 1   B. 70,000 + 3,000 + 10 + 1
   C. 700,000 + 3,000 + 10 + 1   D. 70,000 + 3,000 + 100 + 10
   7. ___

8. Which digit makes the sentence true? 4,518 < 4, __ 18
   F. 3   G. 4   H. 5   J. 6
   8. ___

9. What is the standard form of 300,000,000 + 40,000,000 + 800,000 + 200 + 30 + 6?
   A. 348,236   B. 3,048,236
   C. 3,408,236   D. 340,800,236
   9. ___
Chapter Test, Form 1  (continued)

10. What is the standard form of twenty million, six hundred thousand, four hundred thirty-nine?
   F. 26,439  G. 2,600,439  H. 20,600,439  J. 20,604,039

11. What is the standard form of 90,000,000 + 700,000 + 30,000 + 1,000 + 600 + 5?
   A. 973,165  B. 9,731,605  C. 90,731,065  D. 90,731,605

12. Which digit makes the sentence true? 8,375 = 8,3 [ ] 5
   F. 8  G. 7  H. 5  J. 3

13. Order from greatest to least. 389,042; 389,402; 398,042
   A. 398,042; 389,402; 389,042  B. 389,402; 389,042; 398,042
   C. 398,042; 389,042; 389,402  D. 389,042; 389,402; 398,042

14. Order from least to greatest. 24,421; 24,412; 42,241
   F. 42,241; 24,412; 24,421  G. 42,241; 24,421; 24,412
   H. 24,421; 24,412; 42,241  J. 24,412; 24,421; 42,241

15. There are 9 students in Ms. Gardner’s ballet class. They are planning to attend a dance recital at the local theater. Admission for students is $8 per person. What is the total cost of admission for everyone to go?
   A. $68  B. $72  C. $78  D. $90

16. Ribbon Falls in California is the tallest waterfall in the U.S. It is 1,162 feet high. About how high is it?
   F. 1,200 feet  G. 1,100 feet  H. 1,600 feet  J. 2,000 feet

17. Maria went on four plane trips last year. The spring trip was 738 miles long and the summer trip was 593 miles long. The fall trip was 1,058 miles long and the winter trip was 783 miles long. Which season’s trip was the longest?
   A. spring  B. summer  C. fall  D. winter
Chapter Test, Form 2A

Read each question carefully. Write your answer on the line provided.

1. Round 276,493 to the nearest thousand.
   A. 277,000
   B. 276,500
   C. 280,000
   D. 276,000

2. What is the standard form of seven million, two hundred twenty-five thousand, eight hundred thirteen?
   F. 725,813
   G. 7,225,813
   H. 72,225,803
   J. 700,225,831

3. Order from greatest to least. 94,256; 94,071; 94,568
   A. 94,568; 94,256; 94,071
   B. 94,256; 94,568; 94,071
   C. 94,568; 94,071; 94,256
   D. 94,071; 94,256; 94,568

4. What is the standard form of 700,000 + 300 + 20 + 9?
   F. 703,029
   G. 7,329
   H. 700,329
   J. 70,329

5. Order from least to greatest. 14,324; 13,982; 15,038
   A. 13,982; 14,324; 15,038
   B. 13,982; 15,038; 14,324
   C. 15,038; 14,324; 13,982
   D. 14,324; 15,038, 13,982

6. Write the number 6,017,382 in word form.
   F. six million, one hundred seventeen thousand, three hundred eighty-two
   G. six million, seventeen thousand, three hundred eighty-two
   H. six million, seventeen thousand, three hundred twenty-eight
   J. six million, seven thousand, three hundred eighty-two

7. What is the expanded form of 57,023?
   A. 50,000 + 7,000 + 200 + 3
   B. 50,000 + 700 + 20 + 3
   C. 50,000 + 7,000 + 20 + 3
   D. 500,000 + 7,000 + 20 + 3

8. Which digit makes the sentence true? 6,342 < 6, □ 42
   F. 4
   G. 3
   H. 0
   J. 1

9. What is the standard form of 400,000,000 + 20,000,000 + 700,000 + 600 + 90 + 5?
   A. 427,695
   B. 4,027,695
   C. 420,700,695
   D. 4,270,695

59
10. What is the standard form of fifty million, two hundred thousand, three hundred forty-one?
   F. 50,002,341  G. 52,341,000
   H. 5,200,341   J. 50,200,341

11. What is the standard form of 30,000,000 + 200,000 + 60,000 + 8,000 + 500 + 9?
   A. 326,859  B. 30,268,509
   C. 3,268,509  D. 30,268,905

12. Which digit makes the sentence true? 4,982 = 4,9[□]2
   F. 5  G. 6  H. 7  J. 8

13. Order from greatest to least. 491,153; 491,513; 419,153
   A. 491,153; 491,513; 419,153  B. 491,153; 491,513; 491,153
   C. 419,153; 491,153; 491,513  D. 491,153; 491,513; 491,153

14. Order from least to greatest. 35,532; 35,523; 53,352

15. There are 9 students in Mr. Coleman’s music class. They are planning to attend a concert at a local park. Admission for students is $3 per person. What is the total admission for everyone to go?
   A. $21  B. $27  C. $31  D. $34

   F. Eric  G. Inez  H. Amber  J. Michael

17. Antonio sells magazine subscriptions. He sold 120 subscriptions in September, 102 in October, 122 in November, and 132 in December. In which month did he sell the least subscriptions?
   A. September  B. October  C. November  D. December
Chapter Test, Form 2B

Read each question carefully. Write your answer on the line provided.

1. Round 134,509 to the nearest thousand.
   A. 134,000   B. 135,000   C. 133,000
   1. __________

2. Write the standard form for eight million, three hundred ninety-one thousand, four hundred two.
   F. 800,391,402   G. 8,391,420   H. 8,391,402
   2. __________

3. Order from greatest to least. 78,613; 78,294; 78,537
   A. 78,294; 78,537; 78,613   B. 78,613; 78,537; 78,294   C. 78,537; 78,294; 78,613
   3. __________

4. Write the standard form for fifty-six million, sixty-eight thousand.
   F. 56,000,068   G. 56,068,000   H. 56,680,000
   4. __________

5. Write 200,000 + 900 + 80 + 5 in standard notation.
   A. 20,985   B. 2,985   C. 200,985
   5. __________

6. Order from least to greatest. 47,926; 49,148; 48,325
   F. 47,926; 48,325; 49,148   G. 49,148; 48,325; 47,926   H. 48,325; 49,148; 47,926
   6. __________

7. Write the number 7,028,493 in word form.
   A. seven million, twenty-eight thousand, four hundred ninety-three
   B. seven million, two hundred eighty thousand, four hundred ninety-three
   C. seven million, twenty-eight thousand, four hundred thirty-nine
   7. __________

8. Write 35,062 in expanded form.
   F. 3,000 + 500 + 60 + 2   G. 30,000 + 500 + 60 + 2   H. 30,000 + 5,000 + 60 + 2
   8. __________

9. Which number makes the sentence true? 8,524 < 8, □ 24
   A. 4   B. 5   C. 6
   9. __________
10. Write the standard form for 700,000,000 + 10,000,000 + 800,000 + 400 + 70 + 3
   F. 7,018,400,073   G. 710,800,473   H. 718,473

11. Write the standard form of eighty million, four hundred thousand, nine hundred twenty-six.
   A. 80,004,926   B. 80,400,926   C. 8,400,926

12. Write the standard form of 60,000,000 + 700,000 + 10,000 + 4,000 + 200 + 8
    F. 60,714,208   G. 6,714,208   H. 671,428

13. Which number makes the sentence true? 3,674 = 3,6□4
    A. 6   B. 7   C. 8

14. Order from greatest to least. 637,425; 673,425; 637,452
    F. 673,425; 637,425; 637,452
    G. 637,425; 637,452; 673,425
    H. 673,425; 637,452; 637,425

15. Order from least to greatest. 17,658; 71,685; 71,658
    A. 17,658; 71,685; 71,658
    B. 17,658; 71,658; 71,685
    C. 71,685; 71,658; 17,658

16. There are 6 students in Ms. Lee’s art class. They are going to visit the art museum. Admission is $4 per student. What is the total admission for all students?
    F. $24   G. $28   H. $30

17. Rhode Island is the smallest state in the U.S. The area of Rhode Island is about 1,545 square miles. Round the area of Rhode Island to the nearest hundred.
    A. 1,500   B. 1,400   C. 1,600

18. Rosa went on three plane trips last year. The spring trip was 367 miles long. The summer trip was 495 miles long. The fall trip was 219 miles long. Which season’s trip was the longest?
    F. spring   G. summer   H. fall
Read each question carefully. Write your answer on the line provided.

1. Round to the nearest hundred thousand.
   9,513,572

2. What is the standard form of four million, six hundred twenty-five thousand, seven hundred nine?

3. Order from greatest to least: 307,574; 307,754; 370,574

4. What is the standard form of seven hundred thirty-two million, ninety-four thousand, sixty-two?

5. What is the standard form?
   \[30,000,000 + 900,000 + 2,000 + 60 + 7\]

6. Order from least to greatest: 89,982; 98,892; 89,892

7. What is the word form for 56,702,058?

8. What is the expanded form of 4,880,540?

9. Which symbol makes the sentence true: >, <, or =?
   \[3,518 \bigcirc 3,218\]

10. What is the standard form?
    \[70,000,000 + 3,000,000 + 50,000 + 100 + 90 + 2\]

11. What is the standard form of twenty-three million, four hundred thousand, five hundred sixty-seven?

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Chapter Test, Form 2C  (continued)

12. What is the standard form?
   \[30,000,000 + 800,000 + 10,000 + 4,000 + 60 + 2\]

13. Which symbol makes the sentence true: \(\), \(<\), or \(=\)?
   \[2,108 \bigcirc\ 2,108\]

14. Order from greatest to least: 542,180; 524,180; 542,018

15. Order from least to greatest: 37,380,092; 37,380,091; 37,380,910

16. There are 9 students planning to attend a concert. Admission is $4 per student.
   What is the total admission for everyone to go?

17. Heightstown Middle School has 874 students. Sparta Middle School has 947 students. East Orange Middle School has 1,293 students. Middleneck Middle School has 849 students. Which school has the greatest number of students?

18. California is the most populated state in the U.S. According to the 2000 census, 33,871,648 people live in California. Round this number to the nearest hundred thousand.

19. Kelly read four magazine articles about art. The first article had 1,428 words and the second had 1,782 words. The third article had 1,274 words and the fourth had 1,872 words. Which article had the least number of words?

20. Exit 9 clothing store sold 734 pairs of jeans last year. They also sold 437 t-shirts, 873 pairs of socks, and 783 hats. Which kind of clothing did Exit 9 sell the greatest number of last year?
Read each question carefully. Write your answer on the line provided.

1. Round to the nearest hundred thousand.
   5,586,394

2. Write the standard form for nine million, seven hundred thirty-two thousand, eight hundred sixty-four.

3. Order from greatest to least.
   418,685; 418,586; 481,685

4. Write the standard form for eight hundred forty-three million, sixty-five thousand, seventy-three.

5. Write the standard form for
   40,000,000 + 800,000 + 3,000 + 70 + 6

6. Order from least to greatest.
   78,761; 87,671; 78,671

7. What is the word form for 68,107,093?

8. Write the expanded form for 5,991,780.

9. Which symbol makes the sentence true: >, <, or =?
   4,629 4,429

10. Write the standard form for
    80,000,000 + 2,000,000 + 60,000 + 200 + 80 + 1

11. Write the standard form for thirty-four million, five hundred thousand, six hundred seventy-eight.
Chapter Test, Form 2D  (continued)

12. What is the standard form?
\[ 40,000,000 + 900,000 + 20,000 + 5,000 + 70 + 3 \]

13. Which symbol makes the sentence true: >, <, or =?
3,219 \( \bigcirc \) 3,219

14. Order from greatest to least.
653,291; 635,291; 653,219

15. Order from least to greatest.
48,491,103; 48,491,102; 48,491,021

Solve.

16. There are 8 students in Mr. Garcia’s soccer club. They are planning to attend a local match. Admission is $3 per student. What is the total admission for everyone to go?

17. Garrett Middle School has 903 students. Broad River Middle School has 1,036 students. Washington Middle School has 874 students. Which school has the greatest number of students?

18. Alaska is the largest state in the U.S. The area of Alaska is 656,426 square miles. To the nearest hundred thousand, about how many square miles is the area of Alaska?

19. Allison read three chapters of a book. The first had 1,792 words, the second had 1,843 words, and the third had 1,659 words. Which chapter had the least number of words?

20. The restaurant sold 857 burgers last month. It also sold 693 orders of fries and 742 hot dogs. Which kind of food did the restaurant sell the most of last month?
Read each question carefully. Write your answer on the line provided.

1. Round the number to the nearest hundred thousand. 6,552,977

2. Express the standard form for three million, eight hundred forty-five thousand, nine hundred ninety-one.

3. Order from greatest to least. 332,213; 323,213; 332,312

4. Express the standard form for three hundred six million, seventy-nine thousand, eleven.

5. Express the standard form for 2,000,000 + 900,000 + 40,000 + 1,000 + 80 + 5

6. Order from least to greatest. 89,411; 98,411; 89,114

7. Express 97,403,128 in word form.

8. Express the expanded form for 13,245,687.

9. Which symbol creates a true sentence: >, <, or = ?

5,973 □ 5,873

10. Express the standard form.

50,000,000 + 3,000,000 + 70,000 + 600 + 50 + 7

11. Express the standard form for forty-six million, three hundred thousand, five hundred eighty-eight.
12. Express the standard form.
   \[20,000,000 + 800,000 + 60,000 + 10 + 2\]

13. Which symbol creates a true sentence: \(>, <, =\)?
   \[49,381 \bigg\circ 49,381\]

14. Order the numbers from greatest to least.
   \[732,237; 723,237; 732,372\]

15. Order the numbers from least to greatest.
   \[34,342,214; 34,342,215; 34,342,142\]

Solve.

16. Nine students joined the Drama Club. They are planning on seeing a play at the local theater. Admission is $6 per student. What is the total admission if everyone attends?

17. Franklin Township has 1,286 people and Delvale Township has 1,400 people. Forestville Township has 1,837 people, and Archer Township has 1,150 people. Which township has the greatest number of people?

18. Michigan is the eighth most populous state in the U.S. It has a population of 9,938,444, according to the 2000 census. To the nearest hundred thousand, about how many people reside in Michigan?

19. Austin read four comic books. The first had 1,039 words, and the second had 1,056 words. The third had 1,139 words, and the fourth had 1,006 words. Which comic book had the least number of words?

20. The Salad Bowl Market sold 830 pounds of potatoes last month and 823 pounds of carrots. They also sold 1,045 pound of onions and 983 pounds of tomatoes. Which kind of vegetable did the Salad Bowl Market sell the most of last month?
Demonstrate your knowledge by giving a clear, concise solution to each problem. Be sure to include all relevant drawings and justify your answers. You may show your solution in more than one way or investigate beyond the requirements of the problem. If necessary, record your answer on another piece of paper.

1. There are several ways of reading and writing numbers.
   a. Explain the difference between standard form, word form, and expanded form.
   b. Choose a six-digit number and write it in standard form, word form, and expanded form.

2. a. The numbers 700,005 and 500,700 contain the same digits. Do they represent equal values? Explain.
   b. Which number is greater? Explain.

3. a. Explain why any four-digit number is less than any five-digit number.
   b. Provide examples and plot on a number line.

4. a. Describe a situation where you might want to estimate a number by rounding.
   b. Write the smallest number that you can round to the thousands place to get 5,000. Explain.
Use this recording sheet with pages 50–51 of the Student Edition. 
Read each question. Then fill in the correct answer.

1. A B C D

2. F G H J

3. A B C D

4. F G H J

5. A B C D

6. F G H J

7. A B C D

8. F G H J

9. A B C D

10. F G H J
Test Example

As of 2005, the population of Los Angeles was three million, eight hundred forty-four thousand, eight hundred twenty-nine. What is this number in standard form?

A. 3,844,829  
B. 3,484,829  
C. 3,848,829  
D. 3,844,819

Read the Question
Find the number in standard form.

Solve the Question
Make a place-value chart to help you.

<table>
<thead>
<tr>
<th>millions</th>
<th>hundred thousands</th>
<th>ten thousands</th>
<th>thousands</th>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

Compare the numbers in your chart to the answer choices.
So, the answer is A.

Choose the best answer.

1. What is the standard form for seventy million, five hundred sixty-nine thousand, one hundred thirteen?
   A. 70,569,133  
   B. 70,569,113  
   C. 75,569,113  
   D. 70,569,130

2. What is 36,567,767 rounded to the nearest hundred thousand?
   F. 36,000,000  
   G. 36,500,000  
   H. 36,560,000  
   J. 36,600,000

1. _____
2. _____
3. A supermarket mailed out coupons to five neighborhoods. The number of coupons mailed out is shown in the table below.

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Number of Coupons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pond View</td>
<td>11,660</td>
</tr>
<tr>
<td>The Bluffs</td>
<td>11,760</td>
</tr>
<tr>
<td>Springlake</td>
<td>11,765</td>
</tr>
<tr>
<td>Marshland</td>
<td>11,662</td>
</tr>
</tbody>
</table>

Which neighborhood received the least number of coupons?
A. Pond View
B. The Bluffs
C. Springlake
D. Marshland

4. What is 876,355 rounded to the nearest hundred?
F. 876,355
G. 876,350
H. 876,400
J. 876,500

5. The estimated cost of Sandy’s new bedroom furniture set is eleven thousand, two hundred sixty-five dollars. What is this number rounded to the nearest thousand?
A. $11,000
B. $11,100
C. $11,110
D. $11,111

6. Which of the following has the least value?
F. 8,642,346
G. 8,387,399
H. 9,352,349
J. 8,301,491

7. What is $7,863,877 rounded to the nearest hundred thousand?
A. $8,100,000
B. $8,000,000
C. $7,900,000
D. $7,800,000

8. Which number is less than 15,546,234?
F. 15,546,234
G. 15,546,334
H. 15,547,134
J. 15,536,234

9. Which is the value of the digit 5 in 954,231?
A. 50
B. 500
C. 5,000
D. 50,000
Cumulative Standardized Test Practice (continued)

10. Which symbol makes the following true?
   \[67,234,108 \quad \bigcirc \quad 67,234,108\]
   \[F. > \quad G. < \quad H. = \quad J. +\]
   10. _____

11. What is the value of the digit 3 in 2,456,931?
   11. _____

12. What is the number 6,415,312 rounded to the nearest thousand?
   ____________________________

13. What is the number 18,982 rounded to the nearest ten thousand?
   ____________________________

14. Which digit is in the hundred thousands place in the number 234,579?
   14. _____

Write each number in standard form.

15. seven million, eight hundred fifty-six thousand, nine hundred ninety-nine
   ____________________________

16. twenty-three million, four thousand, twenty-three
   ____________________________

17. sixteen million, three hundred twenty-one thousand, six hundred forty-three
   ____________________________

Compare the numbers using <, >, and =.

18. 3,670,442 \quad \bigcirc \quad 3,670,402
   18. _____

19. 70,442 \quad \bigcirc \quad 71,224
   19. _____

20. 99,546,996 \quad \bigcirc \quad 99,546,996
   20. _____

21. 5,189 \quad \bigcirc \quad 5,298
   21. _____

22. 10,111,234 \quad \bigcirc \quad 10,101,234
   22. _____
**Anticipation Guide**

**Place Value and Number Sense**

Before you begin Chapter 1

1. Read each statement.
2. Decide whether you agree (A) or disagree (D) with the statement.
3. Write A or D in the first column OR if you are not sure whether you agree or disagree, write NS (not sure).

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>A, D, or NS</th>
<th>Statement</th>
<th>STEP 2 A or D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A</td>
<td>There are three different ways to read and write numbers.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>D</td>
<td>176,900 written in expanded form is 100,000 + 70,000 + 60,000 + 900.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>D</td>
<td>One hundred seventy-three thousand, two hundred written in standard form is 173,200.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>A</td>
<td>Word form is the way in which you read a number.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>A</td>
<td>A place-value chart is helpful because it shows you the value of the digits in a number.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>A</td>
<td>On a place-value chart, a period is a group of four digits.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>A</td>
<td>The numbers on a number line are in order from left to right.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>A</td>
<td>The number line can help you to round a whole number.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>A</td>
<td>Rounding is a form of estimation.</td>
<td></td>
</tr>
</tbody>
</table>

After you complete Chapter 1

1. Reread each statement and complete the last column by entering an A (agree) or a D (disagree).
2. Did any of your opinions about the statements change from the first column?
3. For those statements that you mark with a D, use a separate sheet of paper to explain why you disagree. Use examples, if possible.
You can write numbers in different ways using words and digits. The place value chart below shows the value of each digit in the number 237,568. Below the chart, the number appears in standard form, word form, and expanded form.

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hundreds</td>
<td>Tens</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

**Standard form** Uses digits: 237,568

**Word form** Uses words to write the number the way you say it:
Two hundred thirty-seven thousand, five hundred sixty-eight.

**Expanded form** Uses the place value of each digit to write the number:
200,000 + 30,000 + 7,000 + 500 + 60 + 8

Complete the expanded form of each number below.

1. 87,562 = 80,000 + 7,000 + 500 + 60 + 2
2. 431,281 = 400,000 + 30,000 + 1,000 + 200 + 80 + 1

Complete the chart by filling in the standard form and word form of each number:

<table>
<thead>
<tr>
<th>Standard Form</th>
<th>Expanded Form</th>
<th>Word Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. 120,649</td>
<td>100,000 + 20,000 + 600 + 40 + 9</td>
<td>one hundred twenty thousand, six hundred forty-nine</td>
</tr>
<tr>
<td>4. 338,237</td>
<td>300,000 + 30,000 + 8,000 + 200 + 30 + 7</td>
<td>three hundred thirty-eight thousand, two hundred thirty-seven</td>
</tr>
<tr>
<td>5. 513,461</td>
<td>500,000 + 10,000 + 3,000 + 400 + 60 + 1</td>
<td>five hundred thirteen thousand, four hundred sixty-one</td>
</tr>
</tbody>
</table>

Write each number in standard form.

1. five hundred eighty-two thousand, nine hundred forty-seven. 582,947
2. two hundred six thousand, four hundred twenty-nine. 206,429
3. eight hundred thirty-four thousand, six hundred seventy-one. 834,671

Write each number in word form and expanded form.

4. 6,829  six thousand, eight hundred twenty-nine. 6,000 + 800 + 20 + 9
5. 23,741  twenty-three thousand, seven hundred forty-one. 20,000 + 3,000 + 700 + 40 + 1
6. 119,874  one hundred nineteen thousand, eight hundred seventy-four. 100,000 + 10,000 + 9,000 + 800 + 70 + 4
7. 745,293  seven hundred forty-five thousand, two hundred ninety-three. 700,000 + 40,000 + 200 + 90 + 3

Complete the expanded form.

8. 37,568 = 30,000 + 7,000 + 500 + 60 + 8
9. 493,236 = 400,000 + 90,000 + 3,000 + 200 + 30 + 6
10. 548,912 = 500,000 + 40,000 + 8,000 + 900 + 10 + 2
1–1

Homework Practice

Place Value Through Hundred Thousands

Write each number in standard form.

1. three hundred twenty-six thousand, four hundred fifty-one.
   \[326,451\]

2. one hundred forty-five thousand, two hundred thirty-seven.
   \[145,237\]

Write each number in word form and expanded form.

3. eighty-seven thousand, one hundred ninety-two.
   \[80,000 + 7,000 + 100 + 90 + 2\]

4. four hundred thirteen thousand, seven hundred fifty.
   \[400,000 + 10,000 + 3,000 + 700 + 50\]

Complete the expanded form.

5. \[91,765 = 90,000 + \frac{1,000}{60} + \frac{5}{5}\]

6. \[798,054 = 700,000 + \frac{90,000}{50} + \frac{4}{4}\]

Write the value of each underlined digit.

7. \[645,802 \quad 800 \quad 8\]

8. \[271,389 \quad 1,000\]

Spiral Review

Divide. (Previous Grade)

9. \[10 \div 2 = 5\]

10. \[16 \div 4 = 4\]

11. \[9 \div 3 = 3\]

12. \[25 \div 5 = 5\]

13. \[8 \div 1 = 8\]

14. \[36 \div 6 = 6\]

15. \[7 \div 2 = 6\]

16. \[5 \div 4 = 8\]

17. \[3 \div 2 = 7\]

18. \[9 \div 3 = 9\]

19. \[7 \div 3 = 5\]

20. \[8 \div 3 = 4\]

Answers (Lesson 1-1)

1. Michael says he has used 42,567 pencils since he started school. Maria wants to be sure she heard the number correctly. Write 42,567 in word form and in expanded form for Maria.

   \[42,000 + 2,000 + 500 + 60 + 7\]

2. Emily and Inez found a treasure map that shows the location of gold coins. They want to show their friends how much gold they can find. Write the number in standard form.

   \[200,000 + 70,000 + 4,000 + 600 + 90 + 3\]

3. Javier and Nick want to start a dog-walking business after school. They made 1,236 flyers to hand out around their neighborhood. Write the number in word form and in expanded form.

   \[1,000 + 200 + 30 + 6\]

4. Union Township has a population of 1,226,550. What is the value of the underlined digit?

   \[70,000\]

5. Jan’s grandfather was a pilot. He estimates that he has flown 460,500 miles in his life. When Jan told her mother about this, Jan said 406,500 miles. Jan’s mother said she should get her numbers right. What mistake did Jan make? How can Jan fix it?

   Jan switched the 6 and the 0 in the ten thousands and one thousand places. It made the number Jan said much lower than the correct number. Jan has to put the 6 back in the ten thousands place and the 0 in the one thousands place to fix this.
Read each riddle and write the answer in the form requested.

1. It is a three-digit number whose tens digit is 3. Its hundreds digit is 4 more than its ones digit, which is an odd number less than 5. No two digits are the same.

Write it in standard form: 531

2. It is the greatest even two-digit number. The product of its digits is 72.

Write it in word form: ninety-eight

3. It is the least four-digit number that can be rounded up to the nearest hundred as 4,100.

Write it in expanded form: 4,000 + 50

4. It is a four-digit number greater than 7,000. None of its digits are the same and all of them are even numbers. Its ones digit is 6 and the sum of its digits is 20.

Write it in standard form: 8,246 or 8,426

5. Both the sum and the product of its three digits are 6. The least digit is in the hundreds place and the greatest digit is in the ones place.

Write it in word form: one hundred twenty-three

Numbers can be written in different ways using words or digits. The place value chart below shows the value of each digit in the number 14,153,987. Below the chart, the number appears in standard form, word form, and expanded form.

Complete the chart.

<table>
<thead>
<tr>
<th>Standard Form</th>
<th>Expanded Form</th>
<th>Word Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 7,356,237</td>
<td>7,000,000 + 300,000 + 50,000 + 6,000 + 200 + 30 + 7</td>
<td>seven million three hundred fifty-six thousand two hundred thirty-seven</td>
</tr>
<tr>
<td>2. 41,659,703</td>
<td>40,000,000 + 1,000,000 + 600,000 + 50,000 + 9,000 + 700 + 3</td>
<td>forty-one million six hundred fifty-nine thousand, seven hundred three</td>
</tr>
<tr>
<td>3. 2,359,091,568</td>
<td>200,000,000 + 300,000,000 + 5,000,000 + 90,000 + 1,000 + 500 + 60 + 8</td>
<td>two hundred thirty-five million, ninety-one thousand, five hundred sixty-eight</td>
</tr>
</tbody>
</table>
### Skills Practice

**Place Value Through Millions**

**Write each number in standard form.**

1. four million, nine hundred twenty-seven thousand, two hundred fifteen: \(4,927,215\)

2. ninety-seven million, two hundred fifty-three thousand, eight hundred twenty-five: \(97,253,825\)

**Write each number in word form and expanded form.**

3. \(275,364,819\)  
   - Word form: two hundred seventy-five million, three hundred sixty-four thousand, eight hundred nineteen  
   - Expanded form: \(200,000,000 + 70,000,000 + 3,000,000 + 700,000 + 20,000 + 100 + 50 + 9\)

4. \(843,720,159\)  
   - Word form: eight hundred forty-three million, seven hundred twenty thousand, one hundred fifty-nine  
   - Expanded form: \(800,000,000 + 40,000,000 + 3,000,000 + 700,000 + 20,000 + 100 + 50 + 9\)

**Complete the expanded form.**

5. \(413,089,762\)  
   - Expanded form: \(400,000,000 + 10,000,000 + 9,000 + 700 + 60 + 2\)

6. \(152,387,093\)  
   - Expanded form: \(100,000,000 + 50,000,000 + 2,000,000 + 300,000 + 80,000 + 700 + 90 + 3\)

7. \(9,262,548\)  
   - Expanded form: \(9,000,000 + 200,000 + 60,000 + 500 + 40 + 8\)

**Write the value of the underlined digit.**

8. \(1,283,479\)  
   - Underlined digit: \(80,000\)

9. \(50,907,652\)  
   - Underlined digit: \(900,000\)

10. \(20,735,823\)  
    - Underlined digit: \(700,000\)

11. \(318,472,008\)  
    - Underlined digit: \(300,000,000\)

### Homework Practice

**Place Value Through Millions**

**Write each number in standard form.**

1. four hundred thirty-two million, five hundred eighty-six thousand, six hundred twelve: \(432,586,612\)

2. nine hundred fifty-seven million, two hundred four thousand, three hundred eighty-one: \(957,204,381\)

**Write each number in word form and expanded form.**

3. \(103,721,495\)  
   - Word form: one hundred three million, seven hundred twenty-one thousand, four hundred ninety-five  
   - Expanded form: \(100,000,000 + 3,000,000 + 700,000 + 20,000 + 1,000 + 400 + 90 + 5\)

4. \(682,364,518\)  
   - Word form: six hundred eighty-two million, three hundred sixty-four thousand, five hundred eighteen  
   - Expanded form: \(600,000,000 + 80,000,000 + 2,000,000 + 300,000 + 60,000 + 4,000 + 500 + 10 + 8\)

**Write the value of each underlined digit.**

5. \(561,754,908\)  
   - Underlined digit: \(60,000,000\)

6. \(498,749,013\)  
   - Underlined digit: \(8,000,000\)

7. \(7,020,154\)  
   - Underlined digit: \(7,000,000\)

8. \(398,216,045\)  
   - Underlined digit: \(300,000,000\)

**Spiral Review**

**Write the number in standard form. (Lesson 1-1)**

9. two hundred forty-three thousand, seven hundred eighteen: \(243,718\)

10. six hundred ninety-five thousand, eighty-seven: \(695,087\)

**Complete the expanded form.**

11. \(198,045\)  
   - Expanded form: \(100,000 + 90,000 + 8,000 + 40 + 5\)

12. \(982,105\)  
   - Expanded form: \(900,000 + 80,000 + 2,000 + 100 + 5\)
Problem-Solving Practice

Place Value Through Millions

Solve.

1. Hannah read that 11,765,825 people saw the L.A. Lakers play last season. Chris wants to be sure he heard the number correctly. Write 11,765,825 in word form and in expanded form for Chris.

   Number: eleven million, seven hundred sixty-five thousand, eight hundred twenty-five
   Expanded Form: 10,000,000 + 1,000,000 + 700,000 + 60,000 + 5,000 + 800 + 20 + 5

2. There are approximately 200,000,000 + 90,000,000 + 80,000,000 + 800,000 + 60,000 + 9,000 + 500 + 2 people living in the United States. Write the number in standard form. 298,869,502

3. Approximately 37,124,871 people live in California. Write the number in word form and in expanded form.

   Number: thirty-seven million, one hundred twenty-four thousand, eight hundred seventy-one
   Expanded Form: 30,000,000 + 7,000,000 + 100,000 + 20,000 + 4,000 + 800 + 70 + 1

4. The pirate movie made $135,634,554 in one weekend. What is the value of the underlined digit? $30,000,000

5. American car makers produce 5,650,000 cars each year. In a report, Ben wrote that Americans made 6,550,000 cars. What mistake did Ben make? How can he fix it?

   Ben switched the 6 and the 5 in the one millions and hundred thousands places. He can put the 6 back in the hundred thousands place and the 5 in the one millions place to fix this.

Use what you know about place value and telephone numbers to complete this chart.

<table>
<thead>
<tr>
<th>Telephone Number</th>
<th>Standard Form</th>
<th>Expanded Form</th>
<th>Word Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>263-7420</td>
<td>2,637,420</td>
<td>2,000,000 + 600,000 + 30,000 + 7,000 + 400 + 20</td>
<td>Two million, six hundred thirty-seven thousand, four hundred twenty</td>
</tr>
<tr>
<td>905-9618</td>
<td>9,059,618</td>
<td>9,000,000 + 50,000 + 9,000 + 600 + 10 + 8</td>
<td>Nine million, fifty-nine thousand, six hundred eighteen</td>
</tr>
<tr>
<td>731-5882</td>
<td>7,315,882</td>
<td>7,000,000 + 300,000 + 10,000 + 5,000 + 800 + 80 + 2</td>
<td>Seven million, three hundred fifteen thousand, eight hundred eighty-two</td>
</tr>
</tbody>
</table>

Write your telephone number in standard form:

See students’ work.
The Four-Step Plan

If you want to solve a problem, it is important to have a plan. You can use the four-step plan to solve most problems. Use this exercise to learn more:

Miguel’s class is having a picnic. The class will make sandwiches at the picnic. There are 36 students in Miguel’s class and 18 slices of bread in a loaf. How many loaves of bread will Miguel’s class need for the picnic? (Hint: Each sandwich will have 2 slices of bread.)

**Step 1**
Understand What facts do you know? Miguel’s class has 36 students. There are 18 slices of bread in one loaf. What do you need to find? How many loaves of bread the class will need for the picnic.

**Step 2**
Plan You can divide the total number of slices in a loaf by the number of slices needed for a sandwich. Then divide the number of sandwiches needed by the number of sandwiches in a loaf.

**Step 3**
Solve 18 slices ÷ 2 slices of bread for each sandwich = 9 sandwiches in a loaf. Then divide 36 sandwiches by 9 sandwiches in a loaf. 36 ÷ 9 = 4. So, Miguel’s class will need 4 loaves of bread to make sandwiches for everyone at the picnic.

**Step 4**
Check Look back at the problem. One way to check the answer to this problem is to work backwards. How many slices of bread are in 4 loaves? 4 × 18 = 72. How many sandwiches does 72 slices of bread make? 72 ÷ 2 = 36. So the answer is correct.

---

1. There are 30 students who want to play in a basketball tournament. The tournament needs to have 1 game ball for every two teams. If each team will have 5 players, how many basketballs will the tournament need?

3 basketballs

2. Josh and Anthony have a lemonade stand. They sell 2 glasses of lemonade for $1. They sell 14 glasses each afternoon. How much money do Josh and Anthony make after 3 days of selling lemonade?

\[
\frac{14 \text{ glasses}}{2} = \frac{7 \text{ per day}}{1 \text{ day}} \times 3 = \$21
\]

3. Jessica can ride her bike 3 blocks in 1 minute. It takes her twice as long to ride her bike 3 blocks if she carries her backpack. If her school is 12 blocks from her house, how long will it take her to get to school with a full backpack?

3 blocks in 2 minutes with backpack.

\[
\frac{12 \text{ blocks}}{3 \text{ blocks}} = \frac{4.4 \times 2 \text{ minutes}}{8 \text{ minutes}}
\]

4. A group of friends needs to carry a large basket of books to the library. Kevin can carry the basket 5 feet. Rachel can carry it 3 feet farther than Kevin. Daniel can carry the basket half as far as Rachel. If each friend carries the basket 3 times, how far will they move the basket?

\[
5 + 8 + 4 = 17.17 \times 3 = 51 \text{ feet}
\]
Solve. Use the four-step plan.

1. Javier's grandmother lives 120 miles away. It takes 1 hour to go 40 miles by train. How long will it take for Javier to get to his grandmother's home by train?
   
   3 hours

2. The average fourth-grader at Jones Elementary School can complete 2 math problems in 1 minute. A teacher assigned 24 math problems for homework. How long will it take for each student to complete the homework?
   
   12 minutes

3. Brittany wants to make cookies for the whole fourth grade. Her recipe makes 1 dozen cookies. There are 72 fourth-graders at her school. How many dozens of cookies does Brittany need to make for the whole grade?
   
   6 dozen

4. Justin is paid $2 a week for doing chores around the house. He wants to buy a new football that costs $12. How many weeks will Justin have to save his money to buy the football?
   
   6 weeks

5. Ryan and his four friends are planning to visit a zoo. Admission for children is $8. What is the total cost of admission for everyone to go to the zoo?
   
   $40

Write each number in standard form. (Lesson 1-2)

5. five hundred eighty-seven million, one hundred forty-two thousand, eight hundred sixty-six
   
   587,142,866

6. one hundred twenty million, five hundred seventy-four thousand, two hundred seventy-five
   
   120,574,275

Write the value of each underlined digit.

7. 316,113,276
   
   $10,000,000

8. 675,123,278
   
   500,000
One million is a big number, and these are big questions. A good problem-solving plan and a calculator will help you find the answers.

1. About how many years old were you by the time you had lived a million minutes?
   about 2 years old

2. About how old would you be if you lived a million hours?
   about 114 years old

3. About how old would you be if you lived a million days?
   about 2,740 years old

4. About how old would you be if you lived a million weeks?
   about 19,231 years old

5. About how many months is a million weeks?
   about 250,000 months

6. About how many years is a million months?
   about 83,333 years

You compare numbers when you want to know if one number is less than, greater than, or equal to another number. You can use a number line or a place value chart to help you compare numbers. Compare 12,572 and 15,572.

Lesser numbers are on the left on a number line. Greater numbers are on the right.

12,572 is to the left of 15,572. So 12,572 < 15,572.

In a place value chart, you start at the left. Look for the first place where the digits are different to compare the numbers.

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>tens</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>same</td>
<td>different</td>
</tr>
</tbody>
</table>

The number 15,572 has more thousands than 12,572. So 15,572 > 12,572.

Compare. Use >, <, or =.

1. 42,615 < 42,637
2. 13,982 > 13,874
3. 4,765 < 4,219
4. 8,097 < 8,790
5. 7,123 < 7,186
6. 5,835 < 5,083
7. 11,093 < 10,930
8. 13,771 < 13,781
9. 65,987 = 65,987
10. 81,092 < 81,902
11. 124,764 > 124,674
12. 245,718 < 247,518
13. 718,634 < 719,055
14. 3,870,762 > 3,780,763
**Skills Practice**

**Compare Whole Numbers**

1. 1,276 > 1,267
2. 1,589 > 1,587
3. 2,235 < 2,325
4. 4,672 > 4,670
5. 8,902 < 8,912
6. 10,321 > 10,231
7. 14,832 < 14,872
8. 38,087 > 37,088
9. 1,276 > 1,267
10. 100,542 < 105,042
11. 165,982 > 178,983
12. 239,742 < 289,650
13. 563,218 < 652,985
14. 1,986,034 > 1,896,075
15. two hundred fifty-two thousand, nine hundred eighty-five > 252,895
16. five hundred thousand, nine hundred twenty-seven = 500,000 + 900 + 20 + 7
17. six hundred twenty thousand, seven hundred fifty-nine > 621,743
18. forty million, two hundred thousand, seventy-five > 41,201,312

**Solve.**

20. Jorge has 1,325 baseball cards in his collection. Sam wants to have more cards than Jorge by the end of summer. Sam collects 1,297 cards. Who has more cards?

Jorge

21. Andrea read that New York City has 8,008,278 people and that Seoul, South Korea has 10,231,217 people. Andrea wants to live in the city with the most people. Where does Andrea want to live?

Seoul

---

**Homework Practice**

**Compare Whole Numbers**

1. 1,347 > 1,317
2. 5,781 < 5,872
3. 8,091 < 8,912
4. 10,321 > 10,231
5. 14,832 < 14,872
6. 300,000 + 60,000 + 2,000 + 300 + 10 + 7 > 364,375
7. 8,902 < 8,912
8. 38,087 > 37,088
9. 67,982 > 67,892
10. 100,542 < 105,042
11. 165,982 > 178,983
12. 239,742 < 289,650
13. 563,218 < 652,985
14. 1,986,034 > 1,896,075
15. two hundred fifty-two thousand, nine hundred eighty-five > 252,895
16. five hundred thousand, nine hundred twenty-seven = 500,000 + 900 + 20 + 7
17. six hundred twenty thousand, seven hundred fifty-nine > 621,743
18. forty million, two hundred thousand, seventy-five > 41,201,312

**Solve.**

20. Jake delivers 234 newspapers a week. Miranda delivers 477 newspapers a week. How many more newspapers does Miranda deliver than Jake?

243 newspapers
Solve.

1. Charles is moving from Springfield, which has 482,653 people, to Greenville, which has 362,987. Is he moving to a larger or smaller city? Explain.
   
   smaller city;  
   
   482,653 > 362,987

2. The Denver Mint made 2,638,800 pennies. The Philadelphia Mint made 2,806,000 pennies. Which mint made more pennies?
   
   Philadelphia

3. About 450,000 people lived in Maryville in 2000. In 2005, about 467,000 people lived in Maryville. Did the number of people living in Maryville get larger or smaller?
   
   larger

4. In 1950, bike stores sold about 205,850 bikes. In 2000, bike stores sold about 185,000 bikes. Is the number of bikes being sold getting larger or smaller?
   
   smaller

5. In 2000, about 290,000,000 cans of soda were sold each day. In 1970, about 65,000,000 cans were sold each day. Were more cans of soda sold in 2000 or 1970? Explain.
   
   More were sold in 2000.  
   
   290,000,000 > 65,000,000

6. Allison found out that the average American works about 2,100 hours a year. The average French worker works about 1,650 hours a year. Who works more hours?
   
   the average American worker

---

**Enrich**

**More or Less**

Read each question. Then write your answers on the lines provided.

1. How many different three-digit numbers can you make using 1, 2, and 3 as digits?
   
   6

2. From least to greatest, write all of the three-digit numbers you can make using the digits 1, 2, and 3.
   
   123, 132, 213, 231, 312, 321

3. How many different three-digit numbers can you make using 4, 5, and 6 as digits?
   
   6

4. From least to greatest write all of the three-digit numbers you can make using the digits 4, 5, and 6.
   
   456, 465, 546, 564, 645, 654

5. Write the greatest and least numbers you can make using all four of these digits: 0, 3, 5, 7
   
   7,530, 037

Use the signs >, <, and = to compare the values below.

6. \((2 + 4) \equiv (4 + 2)\)

7. \((5 - 3) \equiv (5 + 3)\)

8. \((5 + 8) \equiv (10 + 1)\)

9. \((9 - 6) \equiv (5 - 1)\)

10. \((20 - 4) \equiv (12 + 12)\)

11. \((12 + 5) \equiv (9 + 8)\)

12. \((10 - 5) \equiv (9 - 7)\)

13. \((13 - 7) \equiv (8 + 6)\)

14. \((15 + 3) \equiv (7 + 8)\)

15. \((11 - 3) \equiv (3 + 4)\)
Order Whole Numbers

Order the numbers from greatest to least: 9,245; 6,082; 8,970; 5,329.
You can use a number line or a place value chart to help you order numbers.

Once you place the numbers where they belong on a number line, you can see their order.

In a place value chart, you start at the left. Look for the first place where the digits are different to compare the numbers. Continue through each place value until you have ordered all the numbers.

The number 9,245 has more thousands than all the other numbers. It is the greatest. 5,329 has the least thousands, so it is the least.

Order the numbers from greatest to least.
1. 1,287; 1,509; 1,487; 1,111
   1,509; 1,487; 1,287; 1,111

2. 4,278; 5,761; 4,390; 5,104
   5,761; 5,104; 4,390; 4,278

3. 7,861; 10,865; 9,200; 8,923
   10,865; 9,200; 8,923; 7,861

Order the numbers from least to greatest.
5. 8,362; 8,435; 8,920; 8,231
   8,231; 8,362; 8,435; 8,920

6. 38,271; 37,462; 30,256; 34,247
   30,256; 34,247; 37,462; 38,271

Solve.
10. The all-county track meet was Friday. Below are the times for the fastest 1-mile runs. The coaches need help figuring out who gets the second place ribbon. Order these race times from least to greatest.
   Brianna: 362 seconds
   Lauren: 365 seconds
   Rachel: 358 seconds
   Danielle: 370 seconds

   Whose time was the second least in seconds?
   Danielle
Order the numbers from greatest to least.

1. 5,827; 5,628; 5,835; 5,725
   5,835; 5,827; 5,725; 5,628

2. 17,472; 18,451; 19,629; 17,784
   19,629; 18,451; 17,784; 17,472

3. 34,893; 37,230; 29,167; 38,173
   38,173; 37,230; 34,893; 29,167

4. 273,280; 267,902; 275,784; 270,562
   275,784; 273,280; 270,562; 267,902

5. 478,024; 478,165; 475,907; 477,281
   478,165; 478,024; 477,281; 475,907

Solve.

6. Christine is writing a report about the world’s largest animals. Order these animals by weight from greatest to least to help her decide which animal to write about first.
   - Blue whale: 418,878 lb
   - African elephant: 11,023 lb
   - White rhinoceros: 4,850 lb
   - Indian elephant: 8,818 lb
   **Blue whale, African elephant, Indian elephant, White rhinoceros**

7. Nicole wants to learn more about the islands of the world. Order these islands from greatest to least.
   - Borneo 287,300 mi
   - Madagascar 227,000 mi
   - New Guinea 309,000 mi
   - Greenland 839,999 mi
   **Greenland, New Guinea, Borneo, Madagascar**

Spiral Review

Compare. Use >, <, or =. (Lesson 1-4)

8. 907,654  **<**  987,421
9. 1,235,903  **<**  1,237,903

Solve.

1. For the state high school basketball tournament, the teams are divided into groups based on the size of their high school. Order these high schools from most students to least. Then name the two teams that are from the largest high schools.
   - Fremont: 2,759
   - Kingsville: 1,865
   - Jefferson: 2,341
   - La Plata: 2,056
   **Fremont, Jefferson, La Plata, Kingsville. Fremont and Jefferson are from the largest schools.**

2. Madison wants to know which sports are most popular in California. She reads a list that shows how many kids play each sport. Order the sports from most players to least to help show Madison which sports are popular.
   - Soccer: 3,875,026
   - Lacrosse: 900,765
   - Surfing: 250,982
   - Basketball: 2,025,351
   **soccer, basketball, lacrosse, surfing**

3. Tyler wondered how many people voted in the United States Presidential elections. He wants to know which year had the fewest voters in the last four elections. Order the election years from least to greatest number of voters.
   - 2004: 122,295,345
   - 1996: 96,456,345
   - 2000: 105,586,274
   - 1992: 104,405,155

4. Rosa’s science teacher challenged the class to reduce the amount of electricity they used. First, students needed to find out how much they were using. Order the students from who used the most electricity to who used the least.
   - Rosa: 3,056 kwh
   - Anna: 3,098 kwh
   - Austin: 3,125 kwh
   - Robert: 3,105 kwh
   **Austin, Robert, Anna, Rosa**
George and Kate, who live in Dallas, Texas, are planning a road trip to visit five cities in the United States. George used an atlas to find the distance between Dallas and their first stop in Atlanta, Georgia. He wrote down that distance as 781 miles. Then he quickly jotted down these notes about other distances — 629, 233, 938, 2034, and 1729.

Based on George's notes, decide what route you think they will follow for their road trip. Write the names of the cities in the order you think George and Kate will visit them before returning home.

1. Atlanta, GA
2. Washington, D.C.
3. New York, NY
4. St Louis, MO
5. Sacramento, CA

How did you decide on that order?

Sample Answer: It seemed logical to head further east after visiting Atlanta instead of zig-zagging back and forth across the country. All reasonable explanations should be accepted.
Skills Practice

Round each number to the given place-value position.

1. 482; ten
   
   480

2. 747; ten
   
   750

3. 261; hundred
   
   300

4. 375; hundred
   
   400

5. 1,278; hundred
   
   1,300

6. 3,568; hundred
   
   3,600

7. 4,763; thousand
   
   5,000

8. 5,432; thousand
   
   5,000

9. 12,854; thousand
   
   13,000

10. 35,709; thousand
    
    36,000

11. 1,652,804; hundred thousand
    
    1,700,000

12. 2,398,526; hundred thousand
    
    2,400,000

13. 4,875,062; ten thousand
    
    4,880,000

14. 12,392,604; thousand
    
    12,393,000

15. The Environmental Protection Agency says the Mississippi River is 2,320 miles long. The U.S. Geological Survey says it is 2,300 miles long. Rounded to the nearest hundred, are these two numbers about the same? Explain.

   Yes, they are the same. 2,320 rounded to the hundred is 2,300.

16. The state of California has a land area of 163,692 square miles. Montana has a land area of 147,042 square miles. Rounded to the nearest ten thousand, are the two states' areas the same? Explain.

   No. 163,692 rounds to 160,000. 147,042 rounds to 150,000. California is larger.

17. Rounding to the hundreds place, Devin has to score about 200 points to make the traveling basketball team. He has scored 135 points so far. How many more points will he need to score to make the team? Explain.

   15 points.
   
   135 + 15 = 150, rounds to 200

Homework Practice

Round each number to the given place-value position.

1. 623; ten
   
   620

2. 435; ten
   
   440

3. 581; hundred
   
   600

4. 870; hundred
   
   900

5. 1,302; hundred
   
   1,300

6. 1,447; hundred
   
   1,400

7. 2,398; thousand
   
   2,000

8. 4,628; thousand
   
   5,000

9. 23,876; thousand
   
   24,000

10. 31,098; thousand
    
    31,000

11. 44,872; ten thousand
    
    40,000

12. 65,281; ten thousand
    
    70,000

13. 124,830; ten thousand
    
    120,000

14. 237,524; hundred thousand
    
    200,000

15. 497,320; hundred thousand
    
    500,000

16. 1,567,438; hundred thousand
    
    1,600,000

Solve.

19. There are 572 beans in the jar. Carolina guesses there are 600 beans in the jar. Steven estimates there are 500 beans in the jar. Rounding to the nearest hundred, who estimated correctly?

   Carolina

20. Order from greatest to least. (Lesson 1-5)

   564; 625; 276
   
   625; 564; 276

21. 3,560; 3,542; 3,498
   
   3,589; 3,560; 3,542; 3,498

22. 64,890; 65,032; 64,217; 64,578
   
   65,032; 64,890; 64,578; 64,217

23. 213,093; 212,764; 213,570; 213,435
   
   213,570; 213,435; 213,093; 212,764
### Problem-Solving Practice

**Round Whole Numbers**

**Solve.**

1. Taipei 101 in Taiwan is 1,673 feet tall. How tall is this building when rounded to the nearest hundred? the nearest thousand?
   - 1,700 feet; 2,000 feet

2. The Golden Gate Bridge spans about 4,224 feet. Brian says the bridge spans about 4,000 feet. Samantha says it spans about 4,200 feet. Their teacher says they are both correct. How is this possible? **Brian rounded to the thousand. Samantha rounded to the hundred.**

3. The Lake Mead reservoir at the Hoover Dam covers 157,900 acres. How large is Lake Mead rounded to the nearest hundred thousand? **200,000 acres**

4. Ricardo estimates there are 10,000 balls in the ball pit at the park. His father helps him count the 12,345 balls. Is Ricardo's estimate good if he rounds to the nearest ten thousand? Explain. **It is good to the ten thousand because 12,345 is 10,000 rounded to the ten thousand. It is not good rounded to the thousand because 12,345 is 12,000 rounded to the thousand.**

5. Experts estimate that there are 500,000 leopards living in the wild. If we were able to count all the leopards and found 527,863 leopards, would the 500,000 estimate be a good estimate? Explain. **Yes, 527,863 rounded to the hundred thousand is 500,000.**

6. Gabriella has 15,467 coins she has collected from around the world. Her friends asked her about how many coins were in her collection. What would be a good answer for her to tell them? **Answers will vary. 15,000 would be a good answer if rounding to the thousand.**

---

### Enrich

**Pasta Challenge**

Millions of boxes of pasta were sold in the United States in 2005. This report rounds unit sales to the nearest hundred thousand. Read the report and place a checkmark (√) next to each sentence that could be true.

<table>
<thead>
<tr>
<th>Pasta</th>
<th>Unit Sales (to the nearest hundred thousand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spaghetti</td>
<td>74,800,000</td>
</tr>
<tr>
<td>Macaroni</td>
<td>45,600,000</td>
</tr>
<tr>
<td>Fettuccini</td>
<td>50,800,000</td>
</tr>
<tr>
<td>Spiral</td>
<td>26,900,000</td>
</tr>
<tr>
<td>Angel Hair</td>
<td>13,700,000</td>
</tr>
</tbody>
</table>

[source: Information Resources, Inc.]

- 1. More than 75 million Americans bought a box of spaghetti pasta in 2005. **√**
- 2. At least 13,650,000 boxes of angel hair pasta were sold. **√**
- 3. Fewer than 45,650,000 boxes of Macaroni pasta were purchased. **√**
- 4. Total sales for spiral pasta and angel hair pasta were less than 40,000,000 units. **√**
- 5. The actual number of boxes of Fettuccini pasta sold was 50,782,693. **√**
Problem-Solving Investigation

Sometimes you can solve a problem using more than one strategy. You must choose the strategy that works best for you.

Use this problem to learn more about choosing a strategy:

Sam has 3 shirts to give to his friends. Each friend has one favorite color that is either red, blue, or green. Michelle does not like red or green. Ben does not like blue or red. Lindsey likes red. Who likes green?

Understand
You know there are three friends: Michelle, Ben, and Lindsey. You know there are three shirts: red, blue, and green. You need to find out who likes green.

Plan
Choose a strategy. You have information about three people, but some information is missing for each person. A table is a good way to show what information you have and what information is missing. Make a table to solve the problem.

Solve

<table>
<thead>
<tr>
<th></th>
<th>Red</th>
<th>Blue</th>
<th>Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michelle</td>
<td>No</td>
<td>yes</td>
<td>No</td>
</tr>
<tr>
<td>Ben</td>
<td>No</td>
<td>No</td>
<td>yes</td>
</tr>
<tr>
<td>Lindsey</td>
<td>Yes</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

Since each friend has only one favorite color, you can fill in the rest of the information for each friend. Ben is the friend who likes green.

Check
Look back at the problem. Does the chart show one favorite color for each friend?

Use any strategy shown below to solve. Tell which one you used.

1. Alejandro collected bugs for a science project. He has a painted lady butterfly, a monarch butterfly, a bumble bee, a lime butterfly, a honey bee, a speckled wood butterfly, a carpenter bee, and a plum Judy butterfly. Did he collect more bees or butterflies?
   - butterflies; make a table

2. Isaiah is growing his dog-walking business. The first week he walked 1 dog. The second week he walked 2 dogs. The third week he walked 3 dogs. If this pattern continues, how many dogs will Isaiah walk the seventh week?
   - 7 dogs; look for a pattern

3. Carlos lives 2 blocks west of Kimberly. Elizabeth lives 2 blocks east of Kimberly. How far does Elizabeth live from Carlos?
   - 4 blocks; draw a picture

4. Kelly earns $5 every time she washes her neighbor’s car. How many times will she need to wash the car to earn $45?
   - 9 times; use the four-step plan
Use any strategy shown below to solve. Tell which one you used.

1. A cheetah can run 70 miles in one hour. A rabbit can run 35 miles in one hour. How many hours would it take a rabbit to run as far as a cheetah can run in 2 hours?

   **4 hours; use the four-step plan**

2. Mrs. Jones said the class could decide what game they played this afternoon. The class listed these games: four square, basketball, kickball, four square, kickball, soccer, four square, basketball, four square. Which game should the class play?

   **four square; make a table**

3. Cameron says he runs about 4 miles when he plays a soccer game. Last week he ran about 12 miles. How many soccer games did he play?

   **3 games; use the four-step plan**

4. The zoo is 5 miles from Katie’s house. Her school is 2 miles farther. Katie’s grandmother lives another 3 miles past her school. How far away is Katie’s grandmother’s house from Katie’s house?

   **10 miles; draw a picture**

5. Courtney can make 5 bracelets a week. She wants to make one for each girl in her class. If there are 17 girls in her class, how many weeks will it take her to make the bracelets?

   **4 weeks; use the four-step plan**

6. Zack has 4 younger brothers. Zack is 54 inches tall. The next oldest, James, is 52 inches tall. The next oldest, Kyle, is 50 inches tall. The next oldest, Thomas, is 48 inches tall. If the pattern continues, how tall is the youngest brother, Andrew?

   **46 inches tall; look for a pattern**

7. Alexis and Tyler are getting a dog. They like labradors, golden retrievers, and dalmatians. Their mother said they can get the smallest dog. The average labrador is 70 pounds. The average golden retriever is 65 pounds. The average dalmatian is 55 pounds. Which dog will Alexis and Tyler get?

   **a dalmatian**

8. Marisol sells candy bars to raise money for her softball team. Each day she sells more. The first day she sells 5. The second day she sells 6. The third day she sells 8. The fourth day she sells 11. The fifth day she sells 15. The sixth day she sells 20. How many will she sell on the tenth day?

   **50 candy bars**

9. Erica was searching for her sunglasses. She walked 2 blocks north, 3 blocks south, 4 blocks east, and 3 blocks west. How many blocks did she walk? How far is Erica from where she began her search?

   **12 blocks total. 2 blocks away from the beginning.**

10. Paige and her 3 friends want to go to the movies on Saturday. If tickets are $6 each, how much will it cost for all 4 friends to go to the movies?

    **$24**

---

**Spiral Review**

Round each number to the given place-value position. (Lesson 1-6)

1. 4,563; hundred
2. 1,376; ten thousand
3. 7,412; hundred
4. 140,000
5. 13,000
6. 472,917; hundred thousand
7. 2,349,000
8. 67,924; ten thousand
9. 500,000
10. 10,000
11. 70,000
12. 4,712,634; ten thousand
If you like to fidget with digits, then here’s a problem for you.
Write the digits 1 through 9 on nine separate scraps of paper.
How many ways can you make 3 piles of 3 digits whose sums add up to the numbers on each square below?

\[
\begin{align*}
&13 \\
&15 \\
&17 \\
\end{align*}
\]

Sample answer: \[2 + 3 + 8 = 13; 4 + 5 + 6 = 15; 1 + 7 + 9 = 17\]
Write these numbers on index cards in large digits: 236; 1,409; 3,478; and 23,990. On a separate piece of paper, copy this chart:

<table>
<thead>
<tr>
<th>Thousands Period</th>
<th>Ones Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>hundreds</td>
<td>tens</td>
</tr>
<tr>
<td>hundreds</td>
<td>tens</td>
</tr>
</tbody>
</table>

Read each question aloud to the student. Then write the student’s answers on the lines below the question.

Show the student the index card with 236 written on it. Ask:

1. What is this number?  
   **two hundred thirty-six**

2. Using the place value chart to help you, which digit in 236 is in the tens place?  
   **3**

3. Which digit is in the hundreds place?  
   **2**

4. In this number, 6 has what place value?  
   **6 ones**

Show the student the index card with 1,409 written on it.

5. What is this number?  
   **one thousand four hundred nine**

6. Using the place value chart to help you, which digit in 1,409 is in the tens place?  
   **0**

7. Which digit is in the hundreds place?  
   **4**

8. In this number, 1 has what place value?  
   **1,000**

Show the student with the card with 3,478 written on it. Ask:

9. What is this number?  
   **three thousand four hundred seventy-eight**

10. Using the place value chart to help you, which digit in 23,990 is in the thousands place?  
    **3**

11. Which digit is in the hundreds place?  
    **9**

12. In this number, 0 has what place value?  
    **0**

13. If you added 9 to this number, what digit would be in the ones place?  
    **9**

14. Put the cards with the numbers written on them in order from least to greatest. What is the least number?  
    **236**

15. What is the greatest number?  
    **23,990**
# Chapter 1 Assessment Answer Key

<table>
<thead>
<tr>
<th>Inventory/Placement Test</th>
<th>Chapter Diagnostic Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page 43</td>
<td>Page 44</td>
</tr>
</tbody>
</table>

| 1. B                      | 12. G                      |
| 2. J                      | 13. C                      |
| 4. F                      | 15. D                      |
| 5. B                      |                            |
| 6. H                      |                            |
| 7. A                      |                            |
| 8. G                      |                            |
| 9. C                      |                            |
| 10. G                     |                            |
| 11. B                     |                            |

1. eighty-nine; $80 + 9$
2. seventy-one; $70 + 1$
3. one hundred fifty-three; $100 + 50 + 3$
4. four hundred twenty-two; $400 + 20 + 2$
5. five hundred ninety; $500 + 90$
6. sixty; $60$
7. one thousand thirty-five; $1,000 + 30 + 5$
8. nine thousand, two hundred seventeen; $9,000 + 200 + 10 + 7$
9. $>$
10. $=$
11. $<$
12. $40$
13. $90$
14. $120$
15. yes
### Chapter Pretest

**Page 47**

1. four thousand, one hundred eighty-two; \(4000 + 100 + 80 + 2\)

2. thirty-four thousand, two hundred thirty-one; \(30,000 + 4000 + 200 + 30 + 1\)

3. eight hundred ninety-two thousand, seven hundred sixty-six; \(800,000 + 90,000 + 2,000 + 700 + 60 + 6\)

4. 465

5. 16,999

6. 3,620

7. two thousand, three hundred nine; 2,309

8. fifty-four thousand, ninety-one; 54,091

9. three hundred fifty-eight; 358

10. 9

11. 90

12. 1,000

### Quiz 1

**Page 48**

1. 827,251,614

   \[\begin{align*}
   800,000,000 + \\
   20,000,000 + \\
   7,000,000 + 200,000 + \\
   50,000 + 1,000 + \\
   600 + 10 + 4
   \end{align*}\]

2. nine hundred seventy-two million, seven hundred thirty-one thousand, three hundred eight

3. 7,000,000

   one hundred seventy thousand, three hundred sixty-one

4. 800,000

5. 20,000,000

6. 278,432 steps

### Quiz 2

**Page 49**

1. \(<\)

2. \(>\)

3. \(>\)

4. \(=\)

5. 0

6. 9

7. 3

8. answers will vary: 6

9. 200

10. 3 dozen

11. 3 hours

12. $9
Chapter 1 Assessment Answer Key

Quiz 3
Page 50

Mid-Chapter Review
Page 51

Form 1
Page 57

1. 7,825; 7,697; 7,543; 7,312
   1. C

2. 38,002; 37,999; 37,976; 37,320
   2. G

3. 547,890; 532,410; 524,867; 520,073
   3. C

4. 363,000
   320,749; three hundred twenty thousand, seven hundred forty-nine.

5. 600,000
   42,012,534; forty-two million, twelve thousand, five hundred thirty-four.

6. 56,830,000
   7,000,000

7. 6
   2,000

8. chocolate
   48 minutes

9. 35
   52 steps

(continued on the next page)
## Chapter 1 Assessment Answer Key

**Form 1 (continued)**  
Page 58

<table>
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<tr>
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<th>H</th>
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<td>G</td>
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<td>13.</td>
<td>A</td>
</tr>
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<td>14.</td>
<td>J</td>
</tr>
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<td>B</td>
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<td>16.</td>
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**Form 2A**  
Page 59

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<td>H</td>
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<td>5.</td>
<td>A</td>
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<td>6.</td>
<td>G</td>
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<td>C</td>
</tr>
<tr>
<td>8.</td>
<td>F</td>
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<td>B</td>
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<td>12.</td>
<td>J</td>
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<td>13.</td>
<td>A</td>
</tr>
<tr>
<td>14.</td>
<td>H</td>
</tr>
<tr>
<td>15.</td>
<td>B</td>
</tr>
<tr>
<td>16.</td>
<td>G</td>
</tr>
<tr>
<td>17.</td>
<td>B</td>
</tr>
</tbody>
</table>
Chapter 1 Assessment Answer Key

Form 2B
Page 61

1. B
2. H
3. B
4. G
5. C
6. F
7. A
8. H
9. C

Form 2B
Page 62

10. G
11. B
12. F
13. B
14. H
15. B
16. F

Form 2C
Page 63

1. 9,500,000
2. 4,625,709
3. 370,574; 307,754; 307,574
4. 732,094,062
5. 30,902,067
6. 89,892; 89,982; 98,892
7. fifty-six million, seven hundred two thousand, fifty-eight
8. 4,000,000 + 800,000 + 80,000 + 50 + 40
9. >
10. 73,050,192
11. 23,400,567

(continued on the next page)
### Chapter 1 Assessment Answer Key

#### Form 2C (continued) Page 64

<p>| | |</p>
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<td>12.</td>
<td>30,814,062</td>
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<tr>
<td>13.</td>
<td>=</td>
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<tr>
<td>14.</td>
<td>542,180; 542,018; 524,180</td>
</tr>
<tr>
<td>15.</td>
<td>37,380,091; 37,380,092; 37,380,910</td>
</tr>
<tr>
<td>16.</td>
<td>$36</td>
</tr>
<tr>
<td>17.</td>
<td>East Orange Middle School</td>
</tr>
<tr>
<td>18.</td>
<td>33,900,000</td>
</tr>
<tr>
<td>19.</td>
<td>the third article</td>
</tr>
<tr>
<td>20.</td>
<td>socks</td>
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</tbody>
</table>

#### Form 2D Page 65

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>1.</td>
<td>5,600,000</td>
</tr>
<tr>
<td>2.</td>
<td>9,732,864</td>
</tr>
<tr>
<td>3.</td>
<td>481,685; 418,685; 418,586</td>
</tr>
<tr>
<td>4.</td>
<td>843,065,073</td>
</tr>
<tr>
<td>5.</td>
<td>40,803,076</td>
</tr>
<tr>
<td>6.</td>
<td>78,671; 78,761; 87,671</td>
</tr>
<tr>
<td>7.</td>
<td>sixty-eight million, one hundred seven thousand, ninety-three</td>
</tr>
<tr>
<td>8.</td>
<td>5,000,000 + 900,000 + 90,000 + 1,000 + 700 + 80</td>
</tr>
<tr>
<td>9.</td>
<td>&gt;</td>
</tr>
<tr>
<td>10.</td>
<td>82,060,281</td>
</tr>
<tr>
<td>11.</td>
<td>34,500,678</td>
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</table>

#### Form 2D Page 66

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
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<tbody>
<tr>
<td>12.</td>
<td>40,925,073</td>
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<tr>
<td>13.</td>
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<td>14.</td>
<td>653,291; 653,219; 635,291</td>
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<tr>
<td>15.</td>
<td>48,491,021; 48,491,102; 48,491,103</td>
</tr>
<tr>
<td>16.</td>
<td>$24</td>
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<td>17.</td>
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<td>18.</td>
<td>700,000</td>
</tr>
<tr>
<td>19.</td>
<td>the third</td>
</tr>
<tr>
<td>20.</td>
<td>burgers</td>
</tr>
</tbody>
</table>
Chapter 1 Assessment Answer Key

1. 6,600,000
2. 3,845,991
3. 332,312; 332,213; 323,213
4. 306,079,011
5. 2,941,085
6. 89,114; 89,411; 98,411
7. ninety-seven million, four hundred three thousand, one hundred twenty-eight
8. $54
9. >
10. 53,070,657
11. 46,300,588
12. 20,860,012
13. =
14. 732,372; 732,237; 723,237
15. 34,342,142; 34,342,214; 34,342,215
16. Forestville Township
17. 9,900,000
18. the fourth
19. onions
20. on
# Chapter 1 Assessment Answer Key

Page 69, Extended-Response Test

## Scoring Rubric

<table>
<thead>
<tr>
<th>Level</th>
<th>Specific Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>The student demonstrates a <strong>thorough understanding</strong> of the mathematics concepts and/or procedures embodied in the task. The student has responded correctly to the task, used mathematically sound procedures, and provided clear and complete explanations and interpretations. The response may contain minor flaws that do not detract from the demonstration of a thorough understanding.</td>
</tr>
<tr>
<td>3</td>
<td>The student demonstrates an <strong>understanding</strong> of the mathematics concepts and/or procedures embodied in the task. The student’s response to the task is essentially correct with the mathematical procedures used and the explanations and interpretations provided demonstrating an essential but less than thorough understanding. The response may contain minor errors that reflect inattentive execution of the mathematical procedures or indications of some misunderstanding of the underlying mathematics concepts and/or procedures.</td>
</tr>
<tr>
<td>2</td>
<td>The student has demonstrated only a <strong>partial understanding</strong> of the mathematics concepts and/or procedures embodied in the task. Although the student may have used the correct approach to obtaining a solution or may have provided a correct solution, the student’s work lacks an essential understanding of the underlying mathematical concepts. The response contains errors related to misunderstanding important aspects of the task, misuse of mathematical procedures, or faulty interpretations of results.</td>
</tr>
<tr>
<td>1</td>
<td>The student has demonstrated a <strong>very limited understanding</strong> of the mathematics concepts and/or procedures embodied in the task. The student’s response to the task is incomplete and exhibits many flaws. Although the student has addressed some of the conditions of the task, the student reached an inadequate conclusion and/or provided reasoning that was faulty or incomplete. The response exhibits many errors or may be incomplete.</td>
</tr>
<tr>
<td>0</td>
<td>The student has provided a <strong>completely incorrect</strong> solution or uninterpretable response, or no response at all.</td>
</tr>
</tbody>
</table>
Sample Answers

1. a. Standard form uses digits. Word form is the way we say or read numbers using the names of the digits. Expanded form reflects the way a number is written to show the value of each digit.

   b. Students should choose a six-digit number, 123,456, for example, and identify that number as standard form. Students should write the number in word form, for example, one hundred twenty-three thousand, four hundred fifty-six. Finally, students should write the number in expanded form, for example 100,000 + 20,000 + 3,000 + 400 + 50 + 6.

2. Although the numbers contain the same digits, it is the place of the digits in the number that determines the number’s value.

   a. The first number, 700,005 is greater because 7 is in the hundred thousands place in the first number and 5 is in the hundred thousands place in the second number.

3. a. A four-digit number is in the thousands and a five-digit number is in the ten thousands. The more digits a number has, the bigger it is.

   b. A four-digit number would be to the left of a five-digit number on a number line, for example 7,000 would be to the left of 11,000.

4. Answers will range, but any situation that you would not need an accurate or exact measurement, for example the time it would take to drive to the store or the number of people attending a sporting event.

   a. The answer is 4,500 because to round to the thousands, you must round to the lowest possible number in the hundreds place that will round up to 5.
# Chapter 1 Assessment Answer Key

<table>
<thead>
<tr>
<th>STP Page 71</th>
<th>Page 72</th>
<th>Page 73</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5. A</td>
<td>12. 6,415,000</td>
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<tr>
<td></td>
<td>6. J</td>
<td>13. 20,000</td>
</tr>
<tr>
<td></td>
<td>7. C</td>
<td>14. 2</td>
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<td>8. J</td>
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