Chapter 7
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
• Individual Progress Checklist
• Chapter Diagnostic Test
• Chapter Pretest
• 3 Quizzes
• Mid-Chapter Test
• Vocabulary Test
• Oral Assessment
• Chapter Project Rubric
• Foldables Rubric
• 6 Chapter Tests
• Extended Response Test
• Student Recording Sheet
• Cumulative Standardized Test Practice
• Answer Pages
• Chapter 7 Assessment Line-up
• Answer Keys

All Answers Included
# Grade 3 Chapter 7
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Teacher’s Guide to Using the
Chapter 7 Resource Masters

The Chapter 7 Resource Masters includes the core materials needed for Chapter 7. 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. 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 7-1. 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 Computational 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.

**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.

**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. Some Enrich materials are designed to widen students’ perspectives on the mathematics they are learning. These worksheets are written for use with all levels of students.
Investigation worksheets include a model strategy on the Reteach worksheets and provide problems requiring several alternate strategies on the Homework Practice and Skills Practice worksheets.

**Assessment Options** The assessment masters in the *Chapter 7 Resource Masters* offer a wide variety of assessment tools for monitoring progress as well as final assessment.

**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.

**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.

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

**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 one page for teacher directions and questions and a second page 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.

**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 and is designed for use with on-level students.
- **Form 2A** is designed for on-level students and 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 designed for on-level students.
- **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.

**Student Recording Sheet** This one-page recording sheet is for the standardized test in the Student Edition.

**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.
Cumulative Standardized Test Practice  This two-page test, aimed at on-level students, offers a page of multiple-choice questions and a page of 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 record information from Chapter 7: More Division Facts.

Choose one of the symbols $+$, $-$, $\times$, or $\div$ to make the equation true.

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>=</th>
<th>20</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>=</td>
<td>5</td>
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<tr>
<td>10</td>
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<td>=</td>
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<td>15</td>
<td>15</td>
<td>=</td>
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<td>35</td>
<td>5</td>
<td>=</td>
<td>7</td>
</tr>
<tr>
<td>81</td>
<td>9</td>
<td>=</td>
<td>9</td>
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</table>
# Student-Built Glossary

This is an alphabetical list of new vocabulary terms you will learn in Chapter 7, *More Division Facts*. 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>
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<tbody>
<tr>
<td>array</td>
<td></td>
<td></td>
</tr>
<tr>
<td>divisible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>divide (division)</td>
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# Student-Built Glossary (continued)

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>equation</td>
<td></td>
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<tr>
<td>expression</td>
<td></td>
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<tr>
<td>multiplication</td>
<td></td>
</tr>
<tr>
<td>subtraction</td>
<td></td>
</tr>
<tr>
<td>unit cost</td>
<td></td>
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</tbody>
</table>
Dear Family,

Today my class started Chapter 7: More Division Facts. I will be learning to divide by 3, 4, 6, 7, 8, and 9. I will also be learning to find unit cost. Here are my vocabulary words and an activity that we can do together.

Love, ________________

Key Vocabulary

**unit cost**  The price for one item.

**equation**  A mathematical sentence that contains an equals sign, $=$, indicating that the left side of the equal sign has the same value as the right side. $2 \times 8 = 8 \times 2$

**numerical expression**  An expression that contains numbers and at least one operation. $2 \times 4$

**divisible**  Describes a number that can be divided into equal parts.

**array**  Objects or symbols displayed in rows of the same length and columns of the same length. The length of a row might be different from the length of a column.

**subtraction**  An operation that tells the difference, when some or all are taken away. $9 - 4 = 5$

Activity

Cut 10 circles out of construction paper. Ask: How many circles are there total? How many groups of 2 can you make? How many groups of 5 can you make? If you take two away, how many groups of 2 can you make?

Books to Read

**Math Man**  
by Teri Daniels

**The Toothpaste Millionaire**  
by Jean Merrill

**Reeses’ Pieces Count by Fives**  
by Jerry Pallotta
Estimada familia:

Hoy mi clase comenzó el Capítulo 7: Más operaciones con la división. Aprendere a dividir entre 3, 4, 6, 7, 8 y 9 y también a calcular el costo unitario. A continuación, están mis palabras de vocabulario y una actividad que podemos hacer juntos.

Cariños, _____________

**Vocabulario clave**

**costo unitario**  El precio de un artículo

**ecuación**  Expresión matemática que contiene un signo de igualdad, =, indicando que el lado izquierdo del signo tiene el mismo valor que el lado derecho.

**expresión numérica**  Expresión que contiene números y por lo menos una operación.

**divisible**  Describe un número que se puede dividir en partes iguales

**arreglo**  Objetos o símbolos representados en filas de la misma longitud y columnas de la misma longitud.

**sustracción**  Operación que indica la diferencia cuando se elimina algo o todo.

**Actividad**

Recorten 10 círculos de cartulina. ¿Cuántos círculos hay en total? ¿Cuántos grupos de 2 pueden formar? ¿Cuántos grupos de 5 pueden formar? Si quitan dos, ¿cuántos grupos de 2 pueden formar?

**Libros recomendados**

Math Man
de Teri Daniels

The Toothpaste Millionaire
de Jean Merrill

Reeses’ Pieces Count by Fives
de Jerry Pallotta
Name ___________________________ Date __________________

**Anticipation Guide**

*More Division Facts*

**STEP 1**

*Before you begin Chapter 7*

- 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></td>
<td>1. When reading a division sentence, always read the number under the division symbol first.</td>
<td></td>
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<td></td>
<td>2. $36 \div 6 = 4$.</td>
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<td></td>
<td>3. $4 + 4 + 4$ is the same as $4 \times 3$.</td>
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<td>4. An array can help you understand how division and multiplication are related.</td>
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<td></td>
<td>5. $34 \div 8 = 4$.</td>
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<td>6. There are 49 days in 7 weeks.</td>
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<td></td>
<td>7. If a package of pens costs 56¢ for 7 pens, the unit price of each pen is 7¢.</td>
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<td></td>
<td>8. An expression always contains an equal sign.</td>
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<td></td>
<td>9. $5 \times 5 = 25$ is an example of an equation.</td>
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<td></td>
<td>10. In a phrase, key words <em>half as many</em> tell you to divide.</td>
<td></td>
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**STEP 2**

*After you complete Chapter 7*

- 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.
Chapter 7 Game
Family Facts From Start to Finish

You will need:
2 different types of beans
6 index cards
Marker

Write the numbers 1 through 6 on each index card.

1. Shuffle the cards and place them face down at the side of the game board.
2. Choose a bean and place it on start.
3. Draw a card and move that many places down or across, forward or backward.
4. Make a division or multiplication sentence that includes the number landed on, as a product or a dividend. If correct, remain on the square. If incorrect go back to the previous square.
5. Replace the card face down on the bottom of the stack of-number cards. The player who first gets to the “finish square” wins.
Divide by 3

You can use models to divide.

Find $18 \div 3$. There are 18 stars in all. Make 3 groups with 6 stars in each group. $18 \div 3 = 6$

Divide.

1. $12 \div 3 = \underline{}$
2. $15 \div 3 = \underline{}$
3. $24 \div 3 = \underline{}$
4. $9 \div 3 = \underline{}$
5. $27 \div 3 = \underline{}$
6. $3 \div 3 = \underline{}$

7. $21 \div 3 = \underline{}$
8. $15 \div 3 = \underline{}$
9. $24 \div 3 = \underline{}$

10. $6 \div 3 = \underline{}$
11. $27 \div 3 = \underline{}$
12. $3 \div 3 = \underline{}$

13. $3\overline{18}$
14. $3\overline{21}$
15. $3\overline{12}$
16. $3\overline{27}$
17. $3\overline{24}$
7–1
Skills Practice

Divide by 3

Divide.

1. $18 \div 3 = _____$  
2. $9 \div 3 = _____$  
3. $6 \div 3 = _____$

4. $24 \div 3 = _____$  
5. $3 \div 3 = _____$  
6. $21 \div 3 = _____$

7. $12 \div 3 = _____$  
8. $27 \div 3 = _____$  
9. $15 \div 3 = _____$

10. $3 \div 12$  
11. $3 \div 18$  
12. $3 \div 6$  
13. $3 \div 21$

14. $3 \div 27$  
15. $3 \div 3$  
16. $3 \div 15$  
17. $3 \div 24$

ALGEBRA Complete.

18. Rule: Divide by 3

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
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<tbody>
<tr>
<td>18</td>
<td></td>
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<tr>
<td>24</td>
<td></td>
</tr>
<tr>
<td>27</td>
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</table>

19. Rule: Multiply by 3

<table>
<thead>
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<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
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20. Rule: ________

<table>
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<th>Input</th>
<th>Output</th>
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<tr>
<td>14</td>
<td>11</td>
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<tr>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

Solve.

21. Miss Gomez’s 21 third-grade students work in 3 equal groups to make models of a spacecraft. How many students are in each group?

22. Chuck and his 2 brothers read 15 books about the solar system. Each boy read the same number of books. How many books did each boy read?
Divide.

1. $15 \div 3 = \underline{}$
2. $18 \div 3 = \underline{}$
3. $27 \div 3 = \underline{}$
4. $6 \div 3 = \underline{}$
5. $9 \div 3 = \underline{}$
6. $12 \div 3 = \underline{}$
7. $30 \div 3 = \underline{}$
8. $21 \div 3 = \underline{}$
9. $3 \div 3 = \underline{}$
10. $0 \div 3 = \underline{}$

ALGEBRA Write $>$, $<$, or $=$.

11. $21 \div 3 \underline{} 6 \times 3$
12. $25 \times 1 \underline{} 27 \div 3$

ALGEBRA Complete the table.

<table>
<thead>
<tr>
<th>Input</th>
<th>Rule: Divide by 3</th>
<th>Output</th>
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<td>33</td>
<td>10</td>
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<td>1</td>
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<tr>
<td>24</td>
<td>10</td>
<td>7</td>
</tr>
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</table>

Spiral Review

Divide. (Lesson 6–8)

14. $8 \div 8 = \underline{}$
15. $7 \div 1 = \underline{}$
16. $8 \div 1 = \underline{}$
17. $5 \div 1 = \underline{}$
18. $9 \div 1 = \underline{}$
19. $5 \div 5 = \underline{}$
20. $7 \div 7 = \underline{}$
21. $9 \div 9 = \underline{}$
Solve.

1. Walter has 9 pencils. Every week he uses 3 of them. In how many weeks will Walter use up all of his pencils?

   _____ weeks

2. Elyse served herself and 2 friends 24 ounces of juice. She filled each glass with the same amount of juice. How many ounces of juice did she pour in each glass?

   _____ ounces

3. The gym teacher has 18 basketballs divided equally among 3 bags. For practice she takes 2 basketballs from each bag. How many basketballs are left in one of the bags?

   _______________________

4. Donna bought 3 new pairs of jeans for $30. What was the price of each pair of jeans?

   _______________________

5. Alana mailed 6 letters in 3 different mailboxes. She mailed the same number of letters in each mailbox. How many letters did she mail in each mailbox?

   _____ letters

6. The 27 students in Mrs. Penny’s class are in line to leave school. Mrs. Penny lets her students leave in groups of 3 at a time. How many groups of students will leave?

   _____ groups

7. All three of Tasha’s dogs eat the same amount of food. She feeds them a total of 12 pounds of dry food and 12 pounds of canned food every week. How many pounds of food does each dog eat per week?

   _____________________
Help get Gus the Rabbit out of the garden with the fewest hops. He needs to hop from one head of cabbage to the next. To find the correct path, Gus needs to hop to cabbages with numbers that can be divided by 3. He can hop up or to the right or left. He cannot jump over any cabbages. He needs to end at a cabbage that is in front of a gate.

Write the numbers of the cabbages Gus hopped to get out of the garden.
Write them in order from least to greatest.
Reteach

Divide by 4

To divide the total number of objects, you make equal groups. There are 20 astronauts. Divide the number of astronauts by 4. To divide by 4, make equal groups of 4.

\[ 20 \div 4 = 5 \]

Divide.

1. \[ 12 \div 4 = \underline{\quad} \]

2. \[ 24 \div 4 = \underline{\quad} \]

3. \[ 16 \div 4 = \underline{\quad} \]

4. \[ 32 \div 4 = \underline{\quad} \]

5. \[ 8 \div 4 = \underline{\quad} \]

6. \[ 16 \div 4 = \underline{\quad} \]

7. \[ 12 \div 4 = \underline{\quad} \]

8. \[ 28 \div 4 = \underline{\quad} \]

9. \[ 36 \div 4 = \underline{\quad} \]

10. \[ 4 \div 4 = \underline{\quad} \]

11. \[ 4)24 \]

12. \[ 4)28 \]

13. \[ 4)16 \]

14. \[ 4)36 \]

15. \[ 4)32 \]

16. \[ 4)4 \]

17. \[ 4)20 \]

18. \[ 4)8 \]

19. \[ 4)40 \]

20. \[ 4)12 \]
Skills Practice

Divide by 4

Divide.

1. \(12 \div 4 = \) _____  
2. \(8 \div 4 = \) _____  
3. \(20 \div 4 = \) _____  
4. \(28 \div 4 = \) _____  
5. \(24 \div 4 = \) _____  
6. \(4 \div 4 = \) _____  
7. \(36 \div 4 = \) _____  
8. \(32 \div 4 = \) _____  
9. \(16 \div 4 = \) _____  
10. \(4 \div 16 = \)  
11. \(4 \div 28 = \)  
12. \(4 \div 4 = \)  
13. \(4 \div 20 = \)  
14. \(4 \div 40 = \)  
15. \(4 \div 32 = \)  
16. \(4 \div 8 = \)  
17. \(4 \div 24 = \)  
18. \(4 \div 36 = \)  
19. \(4 \div 0 = \)  

ALGEBRA Complete.

20. Rule: Multiply by 4

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

21. Rule: Divide by 4

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

22. Rule: __________

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>36</td>
<td>9</td>
</tr>
</tbody>
</table>

Solve. Use the data from the pictograph.

23. How many third-grade students went on the school trip?

24. There were 32 fourth-grade students on the school trip. How many symbols would you show on the graph for the fourth-grade students? Draw the symbols on the graph.

School Trip to the Planetarium

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Each \(\) stands for 4 students.
Divide.  
1. 16 ÷ 4  
2. 32 ÷ 4  
3. 28 ÷ 4  
4. 8 ÷ 4  
5. 36 ÷ 4  
6. 12 ÷ 4  
7. 40 ÷ 4  
8. 14 ÷ 2  

ALGEBRA  Find each missing number.  
9. 12 ÷ _____ = 4  
10. _____ ÷ 4 = 10  
11. 20 ÷ _____ = 5  
12. 24 ÷ _____ = 4  

ALGEBRA  Complete the table.  

<table>
<thead>
<tr>
<th>Input</th>
<th>8</th>
<th>16</th>
<th>20</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Spiral Review  
Divide. (Lesson 7–1)  
14. 27 ÷ 3  
15. 30 ÷ 3  
16. 6 ÷ 3  
17. 12 ÷ 3  
18. 9 ÷ 3  
19. 15 ÷ 3  
20. 24 ÷ 8  
21. 18 ÷ 6  
22. 21 ÷ 3  
23. 3 ÷ 3
Problem-Solving Practice

Divide by 4

Solve.

1. Each minute, 4 gallons of water flow into the tub. There are now 8 gallons of water in the tub. How many minutes did that take?
   ______ minutes

2. The Finos have a carton of 12 eggs. If the family eats four eggs a day, how long will they have eggs to eat?
   ______ days

3. Eric pumps the front tire of his bike to 32 pounds. Each push of the pump puts 4 pounds of air into the tire. How many times must Eric push the pump to fill the tire?
   ______ times

4. A boat rental shop rents paddleboats that can hold up to 4 riders. The shop has enough paddle boats for up to 28 people. How many paddleboats does the shop have?
   ______ paddleboats

5. Ollie lent $24 in equal amounts to 4 of his friends. Melissa lent $18 in equal amounts to 3 of her friends. Who lent each friend more money? Explain.

6. A grocery store shelf can hold 4 large boxes of laundry detergent. The store clerk put 25 boxes of laundry on the shelves. What is the least number of shelves needed for the display? Explain.

_________________________
_________________________
_________________________
_________________________
The pioneers are getting ready to cross the prairie. Look at the numbers above each part of the story. Use the numbers to fill in the blanks so that each story part makes sense.

1. The blacksmith made _____ new wheels for the wagons.
   Each wagon needs _____ wheels. There are _____ wagons with new wheels.

2. The blacksmith also made _____ horse shoes. Since each horse gets _____ shoes, _____ horses got new shoes.

3. The pioneers will carry barrels of water on the trip. They will take a total of _____ gallons of water. There are eight wagons making the trip. Only _____ of the wagons will carry water. Each barrel will hold _____ gallons.
Reteach

Problem-Solving Strategy

Make a Table Strategy

Which day had the most sign-ups?

<table>
<thead>
<tr>
<th>Day</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Jim, Barry, Chris, Seth, Eli, Taylor</td>
</tr>
<tr>
<td></td>
<td>Ron, Tiffany, Josh, Donna, Bryan</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Ann, Steve, Tara, Pete, Lily</td>
</tr>
<tr>
<td></td>
<td>Aiko, Warren, Ian, Craig, Sereka</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Tod, Bailey, Carly, Sudi, Donna, Jani, Beth</td>
</tr>
</tbody>
</table>

Step 1
Understand

Be sure you understand the problem.
Read carefully.

What do you know?

• There are _____ days for after-school games.
• There is a list of _____ for each day.

What do you need to find out?

• You need to find out which day had
  ________________
  • To do this, you need to know ____________
sign-ups there were each day.

Step 2
Plan

Make a plan.

A table can help you organize what you know.
Make a table to solve the problem.
Reteach

Problem-Solving Strategy (continued)

Step 3 Solve

Carry out your plan.

Make a table.
Tally the ________ for each day. Write the total number of tallies for each day. Compare the ________ for each day.

Complete the table.

<table>
<thead>
<tr>
<th>Sign-Up: After-School Games</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Monday</td>
</tr>
<tr>
<td>Tuesday</td>
</tr>
<tr>
<td>Wednesday</td>
</tr>
</tbody>
</table>

There are _____ sign-ups for Monday, _____ sign-ups for Tuesday, and _____ sign-ups for Wednesday.

__________ had the most sign-ups.

Step 4 Check

Is the solution reasonable?

Reread the problem.

Does your answer match the data given in the problem? ________________

What other strategy could you use to solve the problem? ________________

Solve. Use the make a table strategy.

1. Donna is making a sign that says “Greetings, Chess Masters!” Which letter does she use the most? ________

2. Four friends were in a tournament. Judy came in sixth, Sam was ninth, Tim was third, Evelyn was fifth. In what order did the friends finish? ________
Skills Practice

Problem-Solving Strategy

Organize the data below in a table.

<table>
<thead>
<tr>
<th>My Favorite Game</th>
<th>Game</th>
<th>Tally</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer:</strong> Jessica, Michael, Akiko, Taylor, Aretha, Jamal, Rick, Paula</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board:</strong> Erica, Lauren, Mark, Andrew, Allison</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Card:</strong> Justin, Carl, Dixie, Ben</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use your table to solve problems 1 and 2.

1. Which game got the most votes?  
   ________________

2. Which game got the fewest votes?  
   ________________

For Exercises 3 and 4, use the shapes that Lorna drew.

3. How many more stars than circles did Lorna draw? Make a table in the box.
   ________________

4. Suppose that Lorna draws 2 more squares. How many squares will she have then?
   ________________
Solve.

1. Mr. Frank is planning a parade. First, 36 musicians will march and play. Second, 32 soldiers will march in uniform; third, 28 horses will join. Fourth, will be clowns. If the pattern continues, how many clowns will walk in the parade?

2. Every time Mr. Frank buys 4 pots of flowers for the float, the flower shop will give him 1 pot free. After 4 weeks, he had 50 pots of flowers. How many pots did he get free?

3. Mr. Frank is collecting money to rent the parade floats that will cost $40. He has $24 so far. How long will it take to have enough money if he collect $4 a week?

4. There are a total of 30 floats for the parade. The parade will last 60 minutes. Mr. Frank wants the floats to travel at an equal pace throughout the parade. How many floats should travel through the parade in 30 minutes?

5. There are 28 horses in the parade. They are walking in rows, with 4 horses in each row. How many rows of horses are in the parade?

6. For every float, Mr. Frank wants 6 people. If there are 20 floats, how many people will Mr. Frank need?

Spiral Review

Divide. (Lesson 7–2)

7. \(24 \div 4\) _____

8. \(4 \div 4\) _____

9. \(28 \div 4\) _____

10. \(0 \div 4\) _____

11. \(36 \div 4\) _____

12. \(16 \div 4\) _____
Enrich

Crack the Codes

Begin at the top of the center oval. Go clockwise around the oval. Add, subtract, multiply, or divide starting with the answer on the previous problem. When you have made it all the way around the oval, you should have the same number you started with. Move out to the next oval. Always go clockwise around the oval. Find the missing numbers that match the letters.

Unscramble the letters to solve this riddle.

A baker baked 12 little cakes with things he first needed to break.

What did he break?
You can make groups to help you divide.

Suppose you have 28 wildflowers. You want to make 7 groups of wildflowers. How many wildflowers will you have in each group?

<table>
<thead>
<tr>
<th>Number in All</th>
<th>Number of Groups</th>
<th>Number in Each Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

So, \(28 \div 7 = 4\).

Complete the division sentence for each picture.

1. 30 \(\div\) 6 = _____
   
   \(35 \div 7 = _____\)

Divide.

3. \(54 \div 6 = _____\)  
4. \(48 \div 6 = _____\)  
5. \(56 \div 7 = _____\)

6. \(42 \div 6 = _____\)  
7. \(28 \div 7 = _____\)  
8. \(18 \div 3 = _____\)

9. \(30 \div 6 = _____\)  
10. \(12 \div 6 = _____\)  
11. \(42 \div 7 = _____\)

12. \(6)\overline{24}\)  
13. \(7)\overline{21}\)  
14. \(7)\overline{63}\)

15. \(7)\overline{35}\)  
16. \(6)\overline{36}\)  
17. \(7)\overline{49}\)
Skills Practice

Divide by 6 and 7

Divide.

1. $12 \div 6 = \underline{\hspace{2cm}}$
2. $35 \div 7 = \underline{\hspace{2cm}}$
3. $24 \div 6 = \underline{\hspace{2cm}}$
4. $7 \div 7 = \underline{\hspace{2cm}}$
5. $30 \div 6 = \underline{\hspace{2cm}}$
6. $42 \div 7 = \underline{\hspace{2cm}}$
7. $18 \div 6 = \underline{\hspace{2cm}}$
8. $56 \div 7 = \underline{\hspace{2cm}}$
9. $54 \div 6 = \underline{\hspace{2cm}}$
10. $48 \div 6 = \underline{\hspace{2cm}}$
11. $21 \div 7 = \underline{\hspace{2cm}}$
12. $63 \div 7 = \underline{\hspace{2cm}}$

13. $7\overline{)28}$
14. $6\overline{)36}$
15. $7\overline{)49}$
16. $6\overline{)24}$
17. $6\overline{)18}$

18. $6\overline{)48}$
19. $7\overline{)63}$
20. $7\overline{)21}$
21. $6\overline{)42}$
22. $7\overline{)14}$

23. $7\overline{)56}$
24. $7\overline{)42}$
25. $6\overline{)54}$
26. $6\overline{)30}$
27. $7\overline{)70}$

ALGEBRA Compare. Write $>$, $<$, or $=$.

28. $28 \div 7 \underline{\hspace{2cm}} 5$
29. $49 \div 7 \underline{\hspace{2cm}} 5$
30. $49 \div 7 \underline{\hspace{2cm}} 8$

31. $7 \div 7 \underline{\hspace{2cm}} 6 \div 6$
32. $42 \div 7 \underline{\hspace{2cm}} 42 \div 7$
33. $35 \div 7 \underline{\hspace{2cm}} 30 \div 6$

34. $24 \div 3 \underline{\hspace{2cm}} 24 \div 6$
35. $56 \div 8 \underline{\hspace{2cm}} 9$
36. $36 \div 6 \underline{\hspace{2cm}} 54 \div 9$

Solve.

37. Alberto plants 42 tree seedlings in 6 rows. Each row has the same number of tree seedlings. How many rows of tree seedlings does Alberto plant?

38. Six park rangers take 54 people on a tour of Great Bear National Park. Each ranger has the same number of tourists. How many people are in each group?
Divide.

1. \(12 \div 6\) _____  
2. \(18 \div 6\) _____  
3. \(28 \div 7\) _____  
4. \(36 \div 6\) _____  
5. \(49 \div 7\) _____  
6. \(14 \div 7\) _____  
7. \(60 \div 6\) _____  
8. \(21 \div 7\) _____  
9. \(42 \div 6\) _____  
10. \(63 \div 9\) _____

ALGEBRA  Complete the table.

11. Rule: Divide by 6

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

12. Rule: Divide by 7

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>63</td>
</tr>
</tbody>
</table>

Solve. Use the make a table strategy. (Lesson 7–3)

13. Rides at an amusement park cost $24 for every 6 people. If a group of 12 people go to the amusement park, how much will they pay?

14. Renee is saving her money to buy a t-shirt that costs $16. She saves $3 the first week, $5 the second week, $2 the third week, and $3 the fourth week. How much more money will she need to save?
Problem-Solving Practice

Divide by 6 and 7

Solve.

1. Len will put 18 goldfish into 6 fishbowls. Each bowl will have the same number of fish. How many goldfish will go in each bowl?

   _____ goldfish

2. There are 14 customers standing in 7 checkout lines. Each line has the same number of customers. How many customers are in each line?

   _____ customers

3. There are 54 cards in a card game. All of the cards are dealt out to the players. Each player gets 6 cards. How many players are in the game?

   _____ players

4. The winning team scored 49 points. There were 7 players on the team. If each player scored the same number of points, how many points did each player score?

   _____ points

5. Mother is making 6 goody bags for Leroy’s party. She will put 24 apple fruit rolls and 24 cherry fruit rolls into the bags. If she puts the same number in each bag, how many fruit rolls will be in each goody bag?

   _____ fruit rolls

6. There are 7 cupcakes for the party. Each cupcake has 1 candle for each year of the birthday boy’s age. There is also an extra candle on each cupcake for good luck. If 49 candles were used on the cupcakes, how old is the birthday boy? Explain.

   ________________________________
   ________________________________
   ________________________________
Enrich

Divide by 6 and 7

You will need a blue, yellow, and black crayon or colored pencil. Use blue to color all the butterflies with dividends that can be divided by 6. Use yellow to color all the butterflies with dividends that can be divided by 7. Circle the butterflies with dividends that can be divided by 6 or 7. Draw black dots on butterflies that cannot be divided by either 6 or 7.

List the dividends divisible by 6 from least to greatest.

_____________________________________________________

List the dividends divisible by 7 from greatest to least.

_____________________________________________________
Reteach
Divide by 8 and 9

Find $40 \div 8$.
Skip count to divide. So, $40 \div 8 = 5$.

Find $45 \div 9$.

Skip count on the number line to find the answer.
Draw arrows on the number line to show your work.
Then complete the number sentence.

1. $32 \div 8 = \underline{4}$

2. $36 \div 9 = \underline{4}$

Divide.

3. $48 \div 8 = \underline{6}$

4. $27 \div 9 = \underline{3}$

5. $56 \div 8 = \underline{7}$

6. $54 \div 9 = \underline{6}$

7. $81 \div 9 = \underline{9}$

8. $9 \div 9 = \underline{1}$

9. $72 \div 8 = \underline{9}$

10. $63 \div 9 = \underline{7}$

11. $45 \div 9 = \underline{5}$
Divide.

1. $18 \div 9 = \underline{2}$
2. $24 \div 8 = \underline{3}$
3. $36 \div 9 = \underline{4}$
4. $72 \div 8 = \underline{5}$
5. $54 \div 9 = \underline{6}$
6. $40 \div 8 = \underline{7}$
7. $8 \div 8 = \underline{8}$
8. $27 \div 9 = \underline{9}$
9. $81 \div 9 = \underline{10}$

10. $8 \overline{)32}$
11. $9 \overline{)63}$
12. $9 \overline{)45}$
13. $8 \overline{)16}$
14. $9 \overline{)72}$
15. $8 \overline{)64}$
16. $9 \overline{)54}$
17. $8 \overline{)56}$
18. $8 \overline{)48}$

ALGEBRA Complete the tables.


<table>
<thead>
<tr>
<th>Input</th>
<th>72</th>
<th>81</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Input</th>
<th>40</th>
<th>48</th>
<th>56</th>
<th>72</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Solve.

22. How many third-grade students volunteered for the Clean-Up Squad?

23. If 56 fourth-grade students volunteer, how many symbols should you show on the graph? Draw the symbols.

Volunteer Clean-Up Squad

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><img src="image" alt="Symbols" /></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Each ![Symbol](image) stands for 8 students.
Divide.
1. $16 ÷ 8$  
2. $32 ÷ 8$
3. $81 ÷ 9$  
4. $8 ÷ 8$
5. $36 ÷ 9$  
6. $45 ÷ 9$
7. $90 ÷ 9$  
8. $72 ÷ 8$
9. $56 ÷ 8$  
10. $63 ÷ 9$

ALGEBRA  Find the missing factor or quotient.

11. $27 ÷ ____ = 3$  
   $3 \times ____ = 27$
12. ____ $\div 9 = 10$  
   $10 \times ____ = 90$
13. $54 ÷ ____ = 9$  
   $6 \times ____ = 54$
14. $64 ÷ ____ = 8$  
   $8 \times ____ = 64$

Divide. (Lesson 7–4)

15. $36 ÷ 6$  
16. $18 ÷ 6$
17. $63 ÷ 7$  
18. $56 ÷ 7$
19. $49 ÷ 7$  
20. $35 ÷ 7$
21. $70 ÷ 7$  
22. $24 ÷ 6$
23. $42 ÷ 6$  
24. $54 ÷ 6$
Problem-Solving Practice

Divide by 8 and 9

Solve.

1. A group of 8 children go to the fair. They share 16 balloons equally. How many balloons does each child get? 
   _______ balloons

2. A group of 9 people go on 27 rides at the fair. Each one goes on the same number of rides. How many rides does each person go on?
   _______ rides

3. Marta bought 48 pieces of silverware. She puts them in a tray with 8 sections. Each section has the same number of pieces. How many pieces of silverware are in each section of the tray?
   _______ pieces

4. Mina sets the dining room table. Every night she puts out 45 dishes for 9 places at the table. How many dishes are set at each place?
   _______ pieces

5. Ty and Shaheed each have 36 rocks. They put their rocks together in a box. The box has 9 sections. If they put the same number of rocks in each section, how many rocks are in each section? Explain.

   __________________________
   __________________________
   __________________________

6. A mural in the aquarium shows octopuses and starfish. Each starfish has 5 arms. Each octopus has 8 legs. There are 20 starfish arms in all. The combined number of starfish arms and octopus legs is 60. How many octopuses are in the mural? Explain.

   __________________________
   __________________________
   __________________________
Divide the number in the shaded part of the circle by the number in the center. Write the answer in the outer part of the circle.

1. \[
\begin{array}{c}
32 \quad 48 \\
16 \quad 8 \quad 8 \\
40 \quad 64 \\
\end{array}
\]

2. \[
\begin{array}{c}
72 \quad 63 \\
90 \quad 9 \quad 9 \\
54 \quad 18 \\
\end{array}
\]

3. \[
\begin{array}{c}
80 \quad 24 \\
56 \quad 8 \quad 72 \\
27 \quad 9 \quad 36 \\
45 \quad 81 \\
\end{array}
\]

4. How can you check your answers?

---

Show an example of how to check \(72 \div 9\).
Unit cost is the cost for one item. To find unit cost, use division.

Jason wants to buy 1 marker. The price for 5 markers is $0.50. How much will it cost to buy only one marker?

### Step 1
What do you know?
- 5 markers cost 50¢.
- The total cost is 50¢.
- The number of items is 5.

### Step 2
Divide the total cost by number of items.

\[
\frac{50}{5} = 10
\]

It will cost 10¢ for one marker.

Find each unit cost.

1. 3 t-shirts for $27 ______
2. 2 hats for $12 ______
3. 4 gym shorts for $24 ______
4. 3 pairs of socks for $3 ______
5. 3 lunches for $6 ______

Solve.

6. Liz has $60 to buy 6 teddy bears. The teddy bears are $8 each. What is her change? ______

7. Cornbread muffins are $12 for a dozen. If Simon wants to buy 5 muffins, how much will they cost? ______
Find each unit cost.

1. 3 bananas for $3
2. 6 apples for $6
3. 1 pad of paper for $3
4. 3 posters for $21
5. 2 basketballs for $20
6. 5 balloons for $5

Find the unit cost to determine the better buy.

7. 5 teddy bears for $30
   2 teddy bears for $18
8. 10 tickets for $20
   3 tickets for $9

ALGEBRA Find the number of items. Then, complete the table.

9. | Number of Items | Input, Total Cost | Output, Unit Cost |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$40</td>
<td>$5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$6</td>
</tr>
<tr>
<td></td>
<td>$32</td>
<td>$1</td>
</tr>
<tr>
<td></td>
<td>$56</td>
<td>$9</td>
</tr>
</tbody>
</table>

10. | Number of Items | Input, Total Cost | Output, Unit Cost |
    |-----------------|------------------|------------------|
    |                 | $81              | $9               |
    |                 |                  | $6               |
    |                 | $63              | $8               |
    |                 | $45              |                  |
Find each unit cost.

1. 3 markers for $9 ______
2. 5 books for $40 ______
3. 1 sandwich for $3 ______

Find each unit cost to determine the better buy.

4. 5 posters for $25
   7 posters for $28 ______________________

5. 9 pens for $18
   5 pens for $15 ______________________

Solve.

6. Sally has $10. Ice cream treats are 5 for $5. She buys 3 ice cream treats. How much change will she receive? ______

Spiral Review

Divide. (Lesson 7–5)

7. 18 ÷ 9 ______
8. 54 ÷ 9 ______
9. 63 ÷ 9 ______
10. 36 ÷ 9 ______
11. 27 ÷ 9 ______
12. 45 ÷ 9 ______
13. 90 ÷ 9 ______
14. 72 ÷ 8 ______
15. 81 ÷ 9 ______
16. 40 ÷ 8 ______
17. 56 ÷ 8 ______
18. 64 ÷ 8 ______
Solve by finding each unit cost.

1. Dave is going camping with his family. Sleeping bags are on sale for 3 for $27. He has to buy 3 to get the sale price. One sleeping bag costs $10. Dave needs 5 sleeping bags. Would Dave save money if he got 6 sleeping bags?

2. Dave has to buy 1 flashlight for each of the 5 members of his family. He spent $50. How much did each flashlight cost?

3. Dave needs to find the best buy on bottled water. He can get a case of 48 bottles for $24, or he can get 5 cases of 10 bottles for $3 a case. Which is the better buy?

4. Dave bought 3 lunches for $15. How much would it cost for 1 lunch if each lunch cost the same amount?

5. The campground charges $21 a week. How much does 1 day cost?

6. Dave’s family spent $27 on gasoline to drive to the campground. They used 9 gallons of gasoline. How much did gas cost per gallon?
Read the problems and solve them.

1. Jody took three friends to the movies for her birthday. She handed the ticket salesperson $16. She bought four children’s tickets. She did not get any change back. How much did each ticket cost?

2. Jody’s dad said he would buy popcorn and a drink for everyone in the group. There were four children and Jody’s dad. The woman at the counter said it would cost $10. How much did the popcorn and drink for each person cost?

3. Jody’s friend Amy surprised Jody with a granola bar. She paid $2.00 and got $0.25 in change. How much did one granola bar cost?

4. After the movie, Jody’s dad took the four children to play miniature golf. He handed the salesperson $20 and got $8 change back. How much was it for each child’s miniature golf ticket?
Choose the best strategy.

Alicia wants to mail 12 letters and 5 postcards. A page of 6 stamps to mail letters costs $2, and a page of 5 stamps to mail postcards costs $1. Alicia has a $10-bill. How much change will she get after paying for the stamps?

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Understand</th>
<th>What do you know? You know that Alicia has 12 letters and 5 postcards to mail. You also know that it costs $2 for 6 letter stamps and $1 for 5 postcard stamps. Alicia will pay with a $10-bill.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>What do you need to find?</strong> How much change Alicia will get after paying for the stamps.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Plan</td>
<td><strong>Choose a strategy.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Making a table will help organize the facts. The table will have two columns, one for letter stamps and one for postcard stamps. The cost will be listed in the rows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Then, total the cost and subtract it from $10 to find the amount Alicia will get back in change.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Solve</td>
<td>**Letter Stamps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2 for 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2 for 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total:</strong> $4 for 12 letter stamps + $1 for 5 postcard stamps = $5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$10 - $5 = $5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>So, Alicia will get $5 in change.</td>
</tr>
</tbody>
</table>
Reteach

Problem-Solving Investigation (continued)

Step 4
Check

Look back at your answer. Does it make sense?
Use division to check.
Alicia will need 2 pages of letter stamps because
$12 \div 6 = 2$. She will need 1 page of postcard stamps
because $5 \div 1 = 1$.
The cost for 2 pages of letter stamps and 1 page of
postcard stamps is $2 + $2 + $1 = $5$. The change for
$5$ from $10$ is $5$.
So, the answer is correct.

Use any strategy shown below to solve. Tell what strategy
you used.

• Act it out
• Draw a picture
• Look for a pattern
• Make a table

1. What is the next number in the pattern?

53, 58, 63, 68, ________________.

2. Margie and Jill have 35 bottles of juice. Margie drinks
2 bottles a day, and Jill drinks 3.

How many days will the juice last? ________________

3. Juan planted 20 seeds. For every 5 seeds he planted, 4 grew
into plants. How many plants did Juan have?

_______________
Solve. Use any strategy.

1. **ALGEBRA** What is the next number in the pattern?
   50, 48, 46, 44, _____

2. Evita is arranging pictures on the wall. She put 3 pictures on the top row. Then, she put 6 pictures on the second row. She put 9 pictures on the third row. She continues this pattern for 2 more rows. How many pictures does Evita have in all?

3. Russ and Marty bought wood for a tree house. They bought 8 long pieces of wood. Each piece cost $5. How much did they spend altogether?

4. The boys have 8 long pieces of wood. They need 24 shorter pieces of wood of equal length. How many parts should they saw each long piece of wood into?

5. The boys bought 4 pounds of nails for $16. They got $4 in change. How much money did they start with?

6. The boys want to buy shingles for their roof, and they have $40 left. If they spend all of their money and get 10 shingles, how much did each shingle cost?
Solve. Use any strategy.


2. Cindy decided to grow her own roses. One rose bush cost $20 and produced 10 roses. Since Cindy paid $10 for 10 roses the year before, did Cindy save money this year by growing her own roses? Explain. ______

3. **ALGEBRA** What is the next number in the pattern?  
   72, 75, 78, 81, ______

4. Sue and her brother Bill were given a case of 30 juice drinks. Sue drinks 2 a day and Bill drinks 1 a day. How long will the case of drinks last? ______

**Spiral Review**

Find each unit cost. (Lesson 7–6)

5. 4 balls for $12 ______

6. 5 notebooks for $5 ______

7. 2 paint sets for $6 ______

Find each unit cost to determine the better buy.

8. 10 ice pops for $10 
   5 ice pops for $10 ________________

9. 6 books for $18 
   3 books for $12 ________________
Look at the numbers in the number bank. Choose numbers to complete each story so that the stories make sense. You may need to use some numbers more than once. Some of the numbers will not be used at all. Write a number sentence for each story.

1. Cory reads his social studies book _____ days during the week. He reads every day. Each day he reads _____ chapters. By the end of the week Cory will have read _____ chapters.
   Number sentence: ____________________________

2. Anna made _____ key rings. She had _____ keys on each. Anna used all 24 keys.
   Number sentence: ____________________________

3. Kasey walks his dog _____ days each week. They do not walk every day. They walk _____ city blocks each time they go out. Kasey and his dog walk 54 city blocks each week.
   Number sentence: ____________________________

4. Miguel and Juanita made 48 pictures to sell at the art fair. They sold half of them to two buyers. Eight people want to purchase the remaining pictures. Each person can purchase _____ pictures.
   Number sentence: ____________________________

5. Petra bought _____ yards of yarn. She is knitting skinny scarves for some friends. She has more than 4 friends but fewer than 7. She used _____ yards of yarn in each scarf.
   Number sentence: ____________________________
Reteach

Algebra: Expressions and Equations

An **expression** is a number sentence that contains numbers, variables, and at least one operation symbol.

An **equation** is a mathematical sentence that contains an equals sign.

Is $2 + 3$ an expression? ______
Why? __________________________________________________________________________

Is $= 5$ an expression? ______
Why? __________________________________________________________________________

Is $2 + 3 = 5$ an equation? ______
Why? __________________________________________________________________________

Write an expression and create an equation for the situation.

1. In the playground, there are 2 swing sets with 3 swings for older children and 6 swing sets with 1 swing each for younger children. Write an expression that shows that younger children have the same amount of swings as the older ones.

Choose one of the symbols $+, -, \times, \text{ or } \div$ to make the equation true.

2. $5 - 3 = 2 \bigcirc 1$
4. $10 \bigcirc 20 = 30$
3. $27 \bigcirc 3 = 3 \times 10$
5. $49 \bigcirc 7 = 7$
Write an expression and create an equation for each situation.

1. Juan had 8 train cars. He lost 2. Then he received 4 cars for his birthday. How many cars does Juan have now?

2. There are 20 action figures and 5 boys. If everyone has equal amounts, how many figures can each boy have to play with?

3. Alma has a collection of 25 dolls from around the world. She sold 2 dolls. Her aunt gave her a new set of 6 Japanese dolls. How many dolls does Alma have now?

Choose one of the symbols $+, -, \times, \text{or } \div$ to make the equation true.

4. $25 \bigcirc 5 = 4 \times 5$
5. $80 - 8 = 9 \bigcirc 8$
6. $14 \div 2 = 6 \bigcirc 1$
7. $56 \bigcirc 6 = 10 \times 5$
8. $20 - 4 = 8 \bigcirc 2$
9. $4 \bigcirc 6 = 20 + 4$
10. $70 + 2 = 9 \bigcirc 8$
11. $18 \div 2 = 3 \bigcirc 3$

Find a number that makes the equation true.

12. $9 \times 3 = \text{_____} + 2$
13. $9 \times 9 = 80 + \text{_____}$
14. $3 \times 3 = \text{_____} + 2$
15. $6 \times 9 = 50 + \text{_____}$
16. $8 \times 3 = \text{_____} + 2$
17. $4 \times 4 = \text{_____} + 8$
Write an expression and an equation for each situation.

1. Meg has 10 books. She was given 2 more for her birthday. How many books does Meg have? ________________

2. There are 12 dolls and 4 girls. If everyone has equal amounts, how many dolls can each girl have? ________________

Choose one of the symbols +, −, ×, or ÷ to make the equation true.

3. 15 5 = 2 × 5
4. 50 − 8 = 6 7
5. 9 8 = 79 − 7
6. 24 ÷ 6 = 32 8

Find a number that makes the equation true.

7. 7 × 3 = _____ − 2
8. 7 × 9 = 30 + _____
9. 8 × 7 = _____ − 4
10. 7 × 6 = 37 + _____

Solve. Use any strategy. (Lesson 7–7)

11. Jerry spent $2 on a drink, $3 on a pretzel, and $5 on a ticket to see the movie. He got $10 in change. How much money did he start with?

12. Lindy’s class has 3 more students than Pablo’s class. Pablo’s class last year had 6 more students than it does this year. This year, Pablo’s class has 20 students. How many students are in Lindy’s class this year?
Write an expression and an equation for each situation.

1. The Lopez family of 4 went camping 5 years in a row. Every year they brought 2 different guests. How many guests did they bring altogether?

2. The Lopez family has 3 tents, and each tent has room for 3 people. How many people do they have room for altogether?

3. There are 20 campers in each section of the camp ground, with an equal number in each section. There are 4 sections. How many campers are in each section?

4. Over the 5 years that the Lopez family went camping, they made 8 new friends each year. How many new friends did they make altogether?

5. Thirty-two of the Lopez family’s new friends came from 4 different states, with the same number from each state. How many came from each of the states?
Write the Sign

Write +, −, ×, or ÷ in each circle to make each number sentence true.
(Hint: Start at the left of each sentence unless there are parentheses. Do operations in parentheses first.)

1. (6 \(\bigcirc\) 1) \(\div\) 1 = 7
2. (9 \(\bigcirc\) 3) \(\bigcirc\) 3 = 6
3. (6 \(\bigcirc\) 4) 1 = 24
4. (5 \(\bigcirc\) 4) \(\div\) 5 = 4
5. (8 \(\bigcirc\) 2) 4 = 16
6. (9 \(\bigcirc\) 2) \(\bigcirc\) 6 = 3
7. (7 \(\bigcirc\) 4) 7 = 21
8. (7 \(\bigcirc\) 5) \(\bigcirc\) 3 = 4
9. 20 \(\div\) (8 \(\bigcirc\) 2) \(\bigcirc\) 5 = 10
10. (15 \(\bigcirc\) 5) \(\div\) (3 \(\bigcirc\) 2) = 2

Write >, <, or = in each circle to make each number sentence true.
(Hint: Start at the left of each sentence unless there are parentheses. Do operations in parentheses first.)

11. (2 \(\times\) 7) \(\bigcirc\) (21 \(\div\) 3)
12. (6 \(\div\) 2) \(\times\) 8 \(\bigcirc\) (6 \(\times\) 4)
13. (10 + 2) + 1 \(\bigcirc\) 7 \(\times\) 2
14. 0 \(\times\) (9 \(\div\) 3) \(\bigcirc\) (9 \(\div\) 3) \(\times\) 1
15. 7 \(\div\) (7 \(\div\) 7) \(\bigcirc\) 7
16. (5 \(\times\) 5) \(\bigcirc\) (6 \(\times\) 4)
17. (7 + 8) \(\div\) 3 \(\bigcirc\) 15 \(\times\) 1
18. 0 + 4 \(\bigcirc\) 4 \(\div\) 4
Elena went to the beach 6 times this month. Dolores went to the beach 4 more times than Elena did. Write an expression that shows the amount of times Dolores went to the beach.

**Step 1**
Reread the problem and find the key words that will tell you what operation to use.

Dolores went 4 more times
The word *more* means addition.

**Step 2**
Put the numbers with the operation.

Elena went 6 times. Dolores went 4 more times.

\[6 + 4 = 10\]
Dolores went to the beach 10 times.

Write each phrase as an expression. Then solve.

1. the *difference* between 23 and 46

2. 56 together with 6

3. 3, 4, and 5 items *in all*

4. 4 less than 12

5. the *product* of 4 and 5

6. 7 times 4

7. 18 minus 10

8. 20 divided by 4

Write equations for the situation. Then solve.

9. Jen fed the family dog once a day for 15 days. Her brother fed the dog twice a day for 10 days. Who fed the dog more?
Write each phrase as an expression. Then solve.

1. 8 boxes each with 0 books
2. the difference between 91 and 85
3. the total of 4 clubs with 10 students in each club
4. play checkers 2 times a week for 8 weeks
5. 45 fish divided equally among 9 tanks.
6. 89 less than 99
7. 6 more than 24
8. the product of 7 and 9

Write two word phrases for each expression.

9. 63 ÷ 9
10. 4 × 8
11. 10 ÷ 2
12. 7 × 6
13. 3 × 2

Write an expression for the situation. Then solve.

14. The school provided oranges for the swim team of 10 students. Ten oranges were bought, and each orange was cut into 6 sections. Each child only ate 4 sections. How many orange sections were left over?
Write each phrase as an expression.

1. 56 students divided equally among 7 tables
2. the total of 7 classes of 10 students
3. 65 less than 75
4. 25 more than 50
5. difference between 34 and 30
6. run 2 times a day for 30 minutes each time
7. the product of 9 and 8
8. 4 boxes each have 6 books

Write phrases for each expression.

9. $25 \div 5$
10. $7 \times 8$

Spiral Review

Choose one of the symbols $+, -, \times, \text{ or } \div$ to make the equation true. (Lesson 7–8)

11. $65 \boxed{} 5 = 10 \times 6$
12. $64 \div 8 = 8 \boxed{} 1$

Find a number to make the equation true.

13. $6 \times 4 = \boxed{} - 2$
14. $9 \times 9 = 50 + \boxed{}$
15. $8 \times 6 = \boxed{} - 9$
16. $7 \times 9 = 50 + \boxed{}$
Write an expression for each situation. Then find the value of the expression to solve.

1. Eva has $10 more than Trina. Trina has saved $2 each day for a week. How much money does Eva have?

2. Berto is 10 years older than Suna. Suna is 15 years old. How old is Berto?

3. Molly will be on vacation at the beach with Ana for 8 days. Tino will join them for half of the time that they are at the beach. How long will Tino stay at the beach?

4. At 4:00 P.M. in the afternoon, there were only 4 bikes left in the bike rack at school. At noon, there were 10 times that many bikes in the rack. How many bikes were in the rack at noon?

5. Each package of chicken soup mix serves 6 people. Ruby wants to serve 36 people chicken soup. How many packages of soup should she buy?

6. Mrs. Perez bought 27 balloons. If 9 children come to her son’s birthday party and she divides the balloons equally, how many balloons will each child bring home?
Read and solve the problems. Then write a true number sentence for each.

1. There are 10 students in two classes going on a special field trip. Four teachers are going with them. The teachers divided the students into equal groups. There will be one teacher with each group. How many students are in each group?

2. Matt had a total of 30 baseball cards. He gave 9 to his brother and 6 to his friend. How many baseball cards does he have left?

3. Paula is studying for her social studies test. She plans to read 35 pages in one week. She is going to read the same number of pages each day. How many pages will she read each day?

4. There are 4 more students in the band than in the school choir. The total number of students in both groups is 24. How many students are in the band?

5. Martin is 7 years older than Pedro. The sum of their ages is 15. How old is Pedro?
## Individual Progress Checklist

<table>
<thead>
<tr>
<th>B</th>
<th>D</th>
<th>M</th>
<th>Goal</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>use repeated subtraction to divide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>use arrays to divide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>use related facts to divide</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>divide by 3</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>divide by 4</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>divide by 6</td>
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<td></td>
<td>divide by 7</td>
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<td>divide by 8</td>
<td></td>
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<td></td>
<td></td>
<td>divide by 9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>write and solve expressions and equations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>solve problems by making a table</td>
<td></td>
</tr>
</tbody>
</table>

## Notes

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Chapter Diagnostic Assessment

Divide.

1. $16 \div 2$
2. $0 \div 14$
3. $5)20$
4. $17 \div 1$
5. $30 \div 10$
6. $1)24$
7. $2)12$
8. $6 \div 2$
9. Fran ordered a pizza to share with three other friends. If the pizza has 8 slices, will there be enough for all 4 friends to have 2 slices? Explain.

Subtract.

10. $6 - 3$
11. $10 - 6$
12. $11 - 5$
13. $12 - 2$

Find each missing number.

14. $3 \times \square = 15$
15. $\square \times 2 = 20$
16. $5 \times \square = 25$
17. $\square \times 2 = 16$
18. Isabel and Rosa each read 8 books this summer. How many books did they read in all?
Chapter Pretest

Divide.

1. $49 \div 7 = \quad 2. 20 \div 5 = \quad 3. 56 \div 8 = \quad 4. 32 \div 4 = \quad 5. 6 \div 54 = \quad 6. 9 \div 45 = \quad 7. 3 \div 21 = \quad 8. 7 \div 70 =

Find the unit cost.

9. 10 cans of soup for $10
10. 6 rolls of paper towels for $12
11. 4 sweatshirts for $36
12. 7 pounds of coffee for $35

Write an equation to answer the question.

13. A pack of chewing gum has 15 pieces. If Mrs. Cooper has 3 children, how many pieces of gum can each child get?

14. A fence is 28 feet long. If 4 boys are asked to paint the fence, how many feet of fence does each boy have to paint?

15. Lan has 64 beads to make string bracelets. If she can fit 8 beads on a string, how many bracelets can she make?

16. There are 18 slices of bread in a loaf. How many sandwiches can a loaf make?
Divide.

1. \(24 \div 3\)
2. \(18 \div 3\)
3. \(21 \div 3\)
4. \(32 \div 4\)
5. \(16 \div 4\)

**Algebra** Write >, <, or =.

6. \(28 \div 4 \underline{\quad} 7 \times 3\)
7. \(2 \times 1 \underline{\quad} 18 \div 3\)

Solve. Use the make a table strategy.

8. Kanya is saving money to buy a new bike that costs $50. She has saved $15 so far. How long will it take her before she has enough money if she saves $7 a week?

9. After Mario buys 5 bowls of soup, he gets 1 free. If Mario eats 10 bowls of soup every month, how many free bowls of soup has he received by the end of 10 months?

10. Sonia is 8 years old. Her sister, Patricia, is 2 years older than she is. How old was Patricia when Sonia was 2 years old?
Divide.

1. $35 \div 7$
2. $24 \div 6$
3. $72 \div 9$
4. $18 \div 6$
5. $36 \div 6$
6. $18 \div 9$
7. $49 \div 7$

ALGEBRA Complete the table.

<table>
<thead>
<tr>
<th>Input</th>
<th>64</th>
<th>?</th>
<th>80</th>
<th>24</th>
<th>?</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>?</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

ALGEBRA Find the number of items. Then, complete the table.

<table>
<thead>
<tr>
<th>Number of Items?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input, Total Cost</td>
</tr>
<tr>
<td>$28$</td>
</tr>
<tr>
<td>?</td>
</tr>
<tr>
<td>$40$</td>
</tr>
<tr>
<td>?</td>
</tr>
</tbody>
</table>
Write an expression to describe each situation.

1. 36 more than 4
2. The product of 10 and 3
3. The difference between 5 and 12
4. 42 books divided among 7 students

Solve. Use any strategy.

5. Sue went to get her picture taken with her friends in the mall. They can get a set of 4 small copies of the picture for $10 or get 1 copy for $4. If Sue wants 22 copies of a picture, how can she get the best price?

6. Carlos and his friend are playing paint ball. Each player starts with 6 balls of paint. When the first 6 balls are finished, they are given 4 balls. Each time the balls are used, they are given 2 less. The game is over when everyone has used up all the paint balls he can get. What is the total number of paint balls the players are given?

Write an expression for each situation.

7. Trent found 2 pennies each day for 10 days. How many pennies did Trent find?

8. Six boys ate 12 apples. Each boy ate the same amount of apples. How many apples did each boy eat?
Read each question carefully. Write your answer on the line provided.

1. Which number makes the number sentence true?
   \[35 \div \underline{} = 5\]
   A. 2  B. 5  C. 6  D. 7

2. What is the missing number?
   \[24 \div 3 = \underline{}\]
   F. 8  G. 6  H. 4  J. 2

3. Solve. Use the make a table strategy.
   On the first day, Kim planted 2 flowers. The second day, she planted 6 flowers. The third day, she planted twice as many as the second day. How many flowers did she plant in all?
   A. 10  B. 18  C. 20  D. 40

4. \[56 \div 7 = 8\]. What is \[56 \div 8\]?
   F. 8  G. 7  H. 4  J. 1

5. What is the cost for one item?
   A. an equation  B. the unit cost  C. the total cost  D. the number of items

6. What is \[2 \times 5 = 5 + 5\] an example of?

7. How do you solve an equation?

8. If you know how much 3 of an item costs, what operation do you use to find the unit cost?

9. What are the parts of an expression?
Using the word bank below, complete each sentence by writing the correct word or words in the blank.

Vocabulary Test

Using the word bank below, complete each sentence by writing the correct word or words in the blank.

unit cost  equation  numerical expression
divisible  array  subtraction

1. A(n) _____ is a mathematical sentence that contains an equal sign, =, indicating that the left side of the equal sign has the same value as the right side.

2. _____ is an operation that tells the difference, when some or all are taken away.

3. The word _____ describes a number that can be divided into equal parts.

4. Objects or symbols displayed in rows of the same length and columns of the same length are known as an _____.

5. A _____ is an expression that contains numbers and at least one operation.

6. The price for one item is the _____.
Oral Assessment

Place 10 paper clips, 4 erasers, and 20 pencils in individual containers. Label the container with the paper clips “10 for $20.” Label the container with the erasers “4 for $24.” Finally, label the container with the pencils “5 for $20.”

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

1. If someone purchased 5 paper clips and 10 pencils, how much would it cost?

2. What is the unit cost per paper clip?

3. What is the unit cost per eraser?

4. What is the unit cost per pencil?

5. Tell how you got your answer.
6. If someone wanted to buy 4 paper clips and 5 pencils, how much would it cost?

7. Explain your answer.

8. Pablo and Rose went to the store to buy paint for an art project. They chose 8 colors. They spent $40. How much did each bottle of paint cost?

9. If they spent $24, how much did each bottle of paint cost?

10. Tell how you got your answer.
Chapter Project Rubric

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

### Accordion Foldable

**More Division Facts**

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

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

1. $24 \div 3 = \square$
   A. 4   B. 6   C. 8   D. 9
   1. _____

2. $16 \div 4 = \square$
   F. 1   G. 2   H. 4   J. 8
   2. _____

3. $27 \div 3 = \square$
   A. 6   B. 7   C. 8   D. 9
   3. _____

4. $36 \div 4 = \square$
   F. 4   G. 6   H. 8   J. 9
   4. _____

5. $15 \div 3 = \square$
   A. 3   B. 5   C. 6   D. 9
   5. _____

6. $3 \sqrt{18} = \square$
   F. 3   G. 4   H. 6   J. 9
   6. _____

7. $4 \sqrt{28} = \square$
   A. 5   B. 6   C. 7   D. 8
   7. _____

8. There are 4 books about planets in the library. Ms. Jones is dividing them evenly among 4 groups of students. How many books does each group get?
   F. 1   G. 2   H. 3   J. 4
   8. _____

9. There are 6 videos about the solar system. Each class gets 3 of the videos. How many classes are there?
   A. 2   B. 3   C. 4   D. 6
   9. _____
10. The science teacher has 4 topics for each group of students to choose from. There are 4 groups of students. If each group chooses the same number of topics, how many topics does each group get?
   F. 2  G. 1  H. 3  J. 4

11. \( \frac{24}{4} = \) 
   A. 3  B. 4  C. 5  D. 6

12. \( \frac{49}{7} = \) 
   F. 5  G. 6  H. 7  J. 8

13. \( \frac{36}{9} = \) 
   A. 3  B. 4  C. 5  D. 6

14. Adrienne buys 6 burgers for $18. What is the unit cost?
   F. $2  G. $3  H. $5  J. $12

15. Stacy buys 6 beach balls for $24. What is the unit cost?
   A. $5  B. $4  C. $2  D. $8

16. Which equation corresponds to this question? There are 40 desks in the classroom with 8 in each row. How many rows are there?
   F. \( 40 - 8 = 32 \)  G. \( 40 + 8 = 48 \)  H. \( 40 \times 8 = 320 \)  J. \( 40 \div 8 = 5 \)

17. What expression corresponds to the phrase? The difference between 82 and 21
   A. \( 82 \div 21 \)  B. \( 82 - 21 \)  C. \( 82 + 21 \)  D. \( 82 \times 21 \)
Chapter Test, Form 2A

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

1. $28 \div 4 = \underline{\hspace{1cm}}$
   - A. 7
   - B. 6
   - C. 8
   - D. 4

2. $12 \div 4 = \underline{\hspace{1cm}}$
   - F. 1
   - G. 3
   - H. 2
   - J. 8

3. $30 \div 3 = \underline{\hspace{1cm}}$
   - A. 6
   - B. 10
   - C. 8
   - D. 7

4. $27 \div 3 = \underline{\hspace{1cm}}$
   - F. 9
   - G. 6
   - H. 4
   - J. 8

5. There are 9 videos about simple machines. Each class gets 3 of the videos. How many classes are there?
   - A. 2
   - B. 3
   - C. 4
   - D. 6

6. $3)15 = \underline{\hspace{1cm}}$
   - F. 3
   - G. 5
   - H. 6
   - J. 9

7. $4)40 = \underline{\hspace{1cm}}$
   - A. 5
   - B. 9
   - C. 10
   - D. 8

8. There are 8 books about biomes in the library. Ms. Brown is dividing them evenly among 4 groups of students. How many books does each group get?
   - F. 1
   - G. 2
   - H. 3
   - J. 4

9. The health teacher has 6 topics for each group of students to choose from. There are 6 groups of students. If each group chooses the same number of topics, how many topics does each group get?
   - A. 3
   - B. 2
   - C. 1
   - D. 8
Chapter Test, Form 2A (continued)

10. 9 ÷ 3 = □
   F. 4   G. 3   H. 6   J. 9   10. _____

11. 6)30 = □
    A. 3   B. 5   C. 6   D. 10   11. _____

12. Mona buys 8 basketballs for $24. What is the unit cost?
    F. $4   G. $3   H. $2   J. $8   12. _____

13. 9)81 = □
    A. 8   B. 4   C. 5   D. 9   13. _____

14. 8)64 = □
    F. 6   G. 7   H. 8   J. 9   14. _____

15. Nikki buys 5 sandwiches for $15. What is the unit cost?
    A. $3   B. $2   C. $5   D. $12   15. _____

16. 7)35 = □
    F. 5   G. 6   H. 7   J. 8   16. _____

17. What expression corresponds to the phrase?
   15 more than 30
    A. 30 ÷ 15   B. 30 + 15
    C. 30 − 15   D. 30 × 15   17. _____

18. What expression corresponds to the phrase?
   24 marbles divided equally among 6 students
    F. 24 + 6   G. 24 ÷ 6   H. 24 − 6   J. 24 × 6   18. _____

19. Which equation corresponds to this question? There are
   32 cars in the parking lot with 8 in each row. How many
   rows are there?
    A. 32 − 8 = 24   B. 32 × 8 = 240
    C. 32 ÷ 8 = 4   D. 32 + 8 = 40   19. _____
Read each question carefully. Write your answer on the line provided.

1. $36 ÷ 4 = \square$
   - A. 12
   - B. 9
   - C. 8
   - D. 7
   1. _____

2. $18 ÷ 6 = \square$
   - F. 2
   - G. 3
   - H. 4
   - J. 5
   2. _____

3. $56 ÷ 7 = \square$
   - A. 12
   - B. 10
   - C. 8
   - D. 5
   3. _____

4. $27 ÷ 3 = \square$
   - F. 9
   - G. 8
   - H. 7
   - J. 3
   4. _____

5. The reading teacher has 28 books for each group of 7 students to choose from. If each group chooses the same number of books, how many books does each group get?
   - A. 2
   - B. 3
   - C. 4
   - D. 5
   5. _____

6. $7 \overline{)21} = \square$
   - F. 5
   - G. 4
   - H. 3
   - J. 2
   6. _____

7. $7 \overline{)28} = \square$
   - A. 6
   - B. 4
   - C. 3
   - D. 2
   7. _____

8. There are 20 books about habitats in the library. Mr. Rodriguez is giving the same amount of books to 5 groups of students. How many books does each group get?
   - F. 6
   - G. 5
   - H. 4
   - J. 2
   8. _____

9. $9 \overline{)63} = \square$
   - A. 6
   - B. 7
   - C. 8
   - D. 9
   9. _____
10. $24 \div 8 = \underline{\hspace{2cm}}$
   F. 7    G. 5    H. 4    J. 3  10. _____

11. $8\overline{)64} = \underline{\hspace{2cm}}$
   A. 8    B. 7    C. 6    D. 4  11. _____

12. $7\overline{)56} = \underline{\hspace{2cm}}$
   F. 9    G. 8    H. 6    J. 5  12. _____

13. There are 8 videos about geology. Each class gets 2 of the videos. How many classes are there?
   A. 1    B. 2    C. 3    D. 4  13. _____

14. $9\overline{)45} = \underline{\hspace{2cm}}$
   F. 6    G. 5    H. 4    J. 3  14. _____

15. Della spends $16 on 4 chicken sandwiches. What is the unit cost?
   A. $2    B. $3    C. $4    D. $5  15. _____

16. Jon spends $21 on 7 jump ropes. What is the unit cost?
   F. $6    G. $4    H. $3    J. $2  16. _____

17. What expression goes with the phrase?
   7 less than 24
   A. $7 - 24$    B. $24 - 7$    C. $24 \times 7$    D. $24 \div 7$  17. _____

18. What expression goes with the phrase?
   32 pencils divided equally among 8 students
   F. $32 \div 8$    G. $36 \div 8$    H. $8 \div 32$    J. $39 \div 8$  18. _____

19. Which equation matches this question? There are 28 cups set up in rows. There are 4 cups in a row. How many rows are there?
   A. $28 \div 4 = 7$    B. $28 - 4 = 24$    C. $28 + 4 = 32$    D. $32 - 4 = 28$  19. _____
Read each question carefully. Write your answer on the line provided.

1. $72 \div 9 = \underline{\hspace{1cm}}$

2. $42 \div 6 = \underline{\hspace{1cm}}$

3. $27 \div 3 = \underline{\hspace{1cm}}$

4. $2 \div \underline{\hspace{1cm}} = 18$

5. $4 \div \underline{\hspace{1cm}} = 16$

6. Tracy has 14 party favors to give to her friends. If 7 friends come to her party, how many favors will each friend get?

7. $7 \div \underline{\hspace{1cm}} = 70$

8. Three zookeepers take care of 21 monkeys. Each zookeeper takes care of the same number of monkeys. How many monkeys does each zookeeper take care of?

9. Teresa buys 3 bottles of water for $9. What is the unit cost?

10. $12 \div 3 = \underline{\hspace{1cm}}$

11. $49 \div 7 = \underline{\hspace{1cm}}$

12. $81 \div 9 = \underline{\hspace{1cm}}$

13. $48 \div 8 = \underline{\hspace{1cm}}$

14. $36 \div 6 = \underline{\hspace{1cm}}$
For Exercises 15–19, find a number that makes the equation true.

15. $4 \times 3 = \underline{\phantom{00}} + 2$

16. $6 \times 6 = \underline{\phantom{00}} + 8$

17. $7 \times 4 = 26 + \underline{\phantom{00}}$

18. $9 \times 6 = 50 + \underline{\phantom{00}}$

19. $8 \times 8 = 30 + \underline{\phantom{00}}$

20. There are 16 meatballs in the spaghetti and meatballs. Each person in a family of 4 gets the same number of meatballs. How many meatballs does each person get?

21. Trey buys 4 tennis balls for $12. What is the unit cost?

22. Write an expression that describes this phrase.
   6 more than 9

23. Write an expression that describes this phrase.
   20 mini muffins divided equally among 4 students

24. Write an equation that describes this situation.
   There are 16 stickers on a sheet with 4 in each row. How many rows are there?

25. Write an expression that describes this phrase. the difference between 13 and 9
Read each question carefully. Write your answer on the line provided.

1. \( 54 \div 6 = \)  
2. \( 90 \div 9 = \)  
3. \( 35 \div 5 = \)  
4. \( 2)14 = \)  
5. \( 4)28 = \)  

6. Jordan has 24 party favors to give to his friends. If 8 friends come to his party, how many favors will each friend get?  
7. \( 6)60 = \)  
8. Four zoo keepers take care of 32 snakes. Each zoo keeper takes care of the same number of snakes. How many snakes does each zoo keeper take care of?  
9. Mario buys 4 bottles of water for $12. What is the unit cost?  
10. \( 16 \div 4 = \)  
11. \( 42 \div 7 = \)  
12. \( 72 \div 9 = \)  
13. \( 40 \div 8 = \)  
14. \( 54 \div 6 = \)
Chapter Test, Form 2D (continued)

For Exercises 15–19, find a number that makes the equation true.

15. 6 × 7 = _____ + 12
16. 7 × 7 = _____ + 1
17. 8 × 9 = 70 + _____
18. 4 × 9 = 6 + _____
19. 3 × 4 = 2 + _____

20. There are 12 pieces of pizza. Each person in a family of 4 gets the same number of pieces. How many pieces of pizza does each person get?

21. Ronald buys 6 golf balls for $12. What is the unit cost?

22. Write an expression that describes this phrase.
4 more than 8

23. Write an expression that describes this phrase.
32 apple wedges divided equally among 4 students

24. Write an equation that describes this situation.
There are 9 pictures on an album page and 3 pictures in each row. How many rows are there?

25. Write an expression that describes this phrase.
The difference between 18 and 9
Chapter Test, Form 3

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

Complete.

1. **Rule: Divide by 4**

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

2. **Rule:**

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>22</td>
<td>17</td>
</tr>
</tbody>
</table>

3. $64 \div 8 =$ □

4. $6 \div 54 =$ □

5. $4 \div 32 =$ □

6. Mrs. Gonzalez served 63 carrot sticks for her son and his 8 friends. How many carrot sticks did each child get?

7. $8 \div 80 =$ □

8. Four zoo keepers take care of 32 snakes and 4 alligators. Each zoo keeper takes care of the same number of reptiles. How many reptiles does each zoo keeper take care of?

9. Dante buys 3 toys for $6. What is the unit cost?

10. $21 \div 3 =$ □

11. $30 \div 6 =$ □

12. $63 \div 9 =$ □
For Exercises 13–17, choose one of the symbols +, −, ×, or ÷ to make the equation true.

13. 60 + 4 = 8 _______ 8
14. 9 × 9 = 70 _______ 11
15. 7 _______ 7 = 40 + 9
16. 58 _______ 4 = 6 × 9
17. 3 × 3 = 10 _______ 1

18. There are 36 grapes and 4 oranges. Each person in a family of 4 gets the same amount of fruit. How many pieces of fruit does each person get?

19. Mia buys 4 basketballs for $24. What is the unit cost?

20. Write an expression that describes this phrase. 4 less than 16

21. Write an expression that describes this phrase. 28 orange slices divided equally among 7 students

22. Write an equation that describes this situation. There are 54 stickers on a page and 6 stickers in each row. How many rows are there?

23. Write an expression that describes this phrase. the difference between 22 and 5
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. a. Explain how to find $27 \div 3$ in two ways.

   __________________________________________________________
   __________________________________________________________

   b. Write 3 different numbers that cannot be divided evenly by 3.

   __________________________________________________________

   c. Without dividing, how do you know that $24 \div 3$ is larger than $24 \div 4$?

   __________________________________________________________

2. Write a problem about a real-world situation that uses the division sentence $35 \div 5$.

   __________________________________________________________

3. a. Emilio has 24 party favors. There are 6 guests coming to his party. How many favors will each guest get?

   __________________________________________________________

   b. If there were 8 guests coming to his party, how many favors would each guest get?

   __________________________________________________________

4. What is unit cost? How can you find unit cost? Provide an example.

   __________________________________________________________
Use this recording sheet with pages 336–337 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

Ms. Gordon has planned a sewing project that calls for buttons. The buttons come in packages of 8. How many packages will she need to buy so that she has 72 buttons?

A. 6  B. 7  C. 8  D. 9

Read the Question

You will need to find out how many packages of buttons are needed to complete the project.

Solve the Question

Make a table to organize the information. Look for a pattern.

<table>
<thead>
<tr>
<th>Packages</th>
<th>Buttons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>48</td>
</tr>
<tr>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td>8</td>
<td>64</td>
</tr>
<tr>
<td>9</td>
<td>72</td>
</tr>
<tr>
<td>10</td>
<td>80</td>
</tr>
</tbody>
</table>

The pattern is to add 8. Every time an extra package is added, the sum increases by 12. So, 9 packages are needed to get 72 buttons.

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

1. Gracie and her sister picked 35 apples. They arranged them into 7 groups. How many apples were in each group?
   A. 5  B. 6  C. 7  D. 8
   1. _____

2. Mr. Patterson divided his class of 24 into 6 groups. Which expression describes the number of students in each group?
   F. 24 + 6  G. 24 − 6  H. 24 × 6  J. 24 ÷ 6
   2. _____

3. The figure below is a model for the multiplication sentence.
   \[7 \times 6 = 42\]
   Which division sentence is modeled by the same figure?
   A. 45 ÷ 5 = 9  B. 40 ÷ 10 = 4  C. 42 ÷ 6 = 7  D. 48 ÷ 8 = 6
   3. _____

4. Carmen bought 4 pairs of gloves. Each pair of gloves cost the same price. The total cost was $20. How much money did each pair of gloves cost?
   F. $6  G. $5  H. $4  J. $3
   4. _____

5. Frank worked 28 hours in March. He worked the same number of hours each week. How many hours did he work each week?
   A. 5  B. 6  C. 7  D. 8
   5. _____

6. Tanya arranged bunches of grapes on a tray. Of the 11 bunches of grapes, 3 are purple. The other bunches are green. What number makes the number sentence true?
   \[11 − 3 = \underline{\hspace{1cm}}\]
   F. 14  G. 10  H. 8  J. 7
   6. _____
7. Which number is 17 more than 2,043?
   A. 2,030  B. 2,040  C. 2,050  D. 2,060
   7. ________________

8. If 5 boxes of oranges cost $20, how much does 1 box cost?
   F. $3  G. $4  H. $5  J. $6
   8. ________________

9. Which number is between 7,457 and 9,467?
   A. 7,389  B. 9,468  C. 9,477  D. 8,973
   9. ________________

10. If $4 \times 3 \times 5 = 60$, then what is $5 \times 4 \times 3$?
    F. 12  G. 20  H. 45  J. 60
    10. ________________

11. Which is the better buy?
    2 pencils for $4 or 4 pencils for $12?
    11. ________________

    12. ________________

13. Find a number that makes the number sentence true.
    $49 \div \square = 7$
    13. ________________

14. Write an expression for the situation. Then solve. Sadie has 15 books. She received 2 more for her birthday. How many books does Sadie have now?
    14. ________________
## Chapter 7 Assessment Answer Key

**Page 77, 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 <em>thorough understanding</em> 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 <em>understanding</em> 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 <em>partial understanding</em> 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 <em>very limited understanding</em> 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 <em>completely incorrect</em> solution or uninterpretable response, or no response at all.</td>
</tr>
</tbody>
</table>
In addition to the scoring rubric found on page 82, the following sample answers may be used as guidance in evaluating open-ended assessment items.

1. a. Answers will vary. Sample answer: You can find $27 \div 3$ by using repeated subtraction or by using an array. For repeated subtraction, you figure out:
   
   $27 - 3 = 24 - 3 = 21 - 3$
   $= 18 - 3 = 15 - 3 = 12 - 3$
   $= 9 - 3 = 6 - 3 = 3 - 3 = 0$.

   You subtracted 9 times so you know that there are 9 groups of 3 in 27. An example of an array that can help determine $27 \div 3$ is:

   b. 10, 17, 25

c. Answers will vary. Sample answer: I know that $24 \div 3$ is larger than $24 \div 4$ because if you divide the same number of objects into 3 groups and 4 groups, the 4 groups will have less objects in each group.

2. Answers will vary. Sample problem: There are 35 students in Mr. Jones’ class. He wants to divide the students evenly into 5 groups for a group project. How many students will be in each group? [Answer: 7 students]

3. a. Each guest will get 4 party favors.
   b. Each guest would get 3 party favors.

4. Answers may slightly vary. Sample answer: Unit cost is the price per item. To find unit cost, you can divide. For example: If you can get 5 cans of soup for $5, the unit cost for one can of soup is $1.
**Graphic Organizer**

Use this graphic organizer to record information from Chapter 7: More Division Facts.

Choose one of the symbols +, −, ×, or ÷ to make the equation true.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>×</td>
<td>4</td>
<td>=</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>3</td>
<td>=</td>
</tr>
<tr>
<td>10</td>
<td>×</td>
<td>1</td>
<td>=</td>
</tr>
<tr>
<td>15</td>
<td>+</td>
<td>15</td>
<td>=</td>
</tr>
<tr>
<td>35</td>
<td>÷</td>
<td>5</td>
<td>=</td>
</tr>
<tr>
<td>81</td>
<td>÷</td>
<td>9</td>
<td>=</td>
</tr>
</tbody>
</table>
**Reteach**

Divide by 3

You can use models to divide.

Find 18 ÷ 3. There are 18 stars in all. Make 3 groups with 6 stars in each group. 18 ÷ 3 = 6

---

**Skills Practice**

Divide by 3

**Divide.**

1. $18 ÷ 3 = \boxed{6}$
2. $9 ÷ 3 = \boxed{3}$
3. $6 ÷ 3 = \boxed{2}$
4. $24 ÷ 3 = \boxed{8}$
5. $3 ÷ 3 = \boxed{1}$
6. $21 ÷ 3 = \boxed{7}$
7. $12 ÷ 3 = \boxed{4}$
8. $27 ÷ 3 = \boxed{9}$
9. $15 ÷ 3 = \boxed{5}$

**ALGEBRA Complete.**

18. Rule: Divide by 3

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>27</td>
<td>9</td>
</tr>
</tbody>
</table>

19. Rule: Multiply by 3

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

20. Rule: Subtract 3

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>18</td>
<td>15</td>
</tr>
</tbody>
</table>

**Solve.**

21. Miss Gomez’s 21 third-grade students work in 3 equal groups to make models of a spacecraft. How many students are in each group? $\boxed{7}$ students

22. Chuck and his 2 brothers read 15 books about the solar system. Each boy read the same number of books. How many books did each boy read? $\boxed{5}$ books
Divide by 3

1. \(15 \div 3 = \) __5__
2. \(18 \div 3 = \) __6__
3. \(27 \div 3 = \) __9__
4. \(6 \div 3 = \) __2__
5. \(9 \div 3 = \) __3__
6. \(12 \div 3 = \) __4__
7. \(30 \div 3 = \) __10__
8. \(21 \div 3 = \) __7__
9. \(3 \div 3 = \) __1__
10. \(0 \div 3 = \) __0__

ALGEBRA Write >, <, or =.

11. \(21 \div 3 \) __<__ \(6 \times 3\)
12. \(25 \times 1 \) __>__ \(27 \div 3\)

ALGEBRA Complete the table.

<table>
<thead>
<tr>
<th>Input</th>
<th>Rule: Divide by 3</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

Solve.

1. Walter has 9 pencils. Every week he uses 3 of them. In how many weeks will Walter use up all of his pencils?

   _3_ weeks

2. Elyse served herself and 2 friends 24 ounces of juice. She filled each glass with the same amount of juice. How many ounces of juice did she pour in each glass?

   _8_ ounces

3. The gym teacher has 18 basketballs divided equally among 3 bags. For practice she takes 2 basketballs from each bag. How many basketballs are left in one of the bags?

   _4_ basketballs

4. Donna bought 3 new pairs of jeans for $30. What was the price of each pair of jeans?

   _$10_ 

5. Alana mailed 6 letters in 3 different mailboxes. She mailed the same number of letters in each mailbox. How many letters did she mail in each mailbox?

   _2_ letters

6. The 27 students in Mrs. Penny’s class are in line to leave school. Mrs. Penny lets her students leave in groups of 3 at a time. How many groups of students will leave?

   _9_ groups

7. All three of Tasha’s dogs eat the same amount of food. She feeds them a total of 12 pounds of dry food and 12 pounds of canned food every week. How many pounds of food does each dog eat per week?

   _8_ pounds per week

Divide. (Lesson 6–8)

14. \(8 \div 8 = \) __1__
15. \(7 \div 1 = \) __7__
16. \(8 \div 1 = \) __8__
17. \(5 \div 1 = \) __5__
18. \(9 \div 1 = \) __9__
19. \(5 \div 5 = \) __1__
20. \(7 \div 7 = \) __1__
21. \(9 \div 9 = \) __1__
Answers (Lessons 7–1 and 7–2)

Divide by 4

To divide the total number of objects, you make equal groups. There are 20 astronauts. Divide the number of astronauts by 4.

To divide by 4, make equal groups of 4.

20 \div 4 = 5

1. 12 \div 4 = 3
2. 24 \div 4 = 6
3. 32 \div 4 = 8
4. 20 \div 4 = 5

Enrich

Get Gus out of the Garden

Help get Gus the Rabbit out of the garden with the fewest hops. He needs to hop from one head of cabbage to the next. To find the correct path, Gus needs to hop to cabbages with numbers that can be divided by 3. He cannot jump over any cabbages. He needs to end at a cabbage that is in front of a gate.

Write the numbers of the cabbages Gus hopped to get out of the garden, in order from least to greatest.

9, 15, 6, 24, 12, 18, 3, 21

Grade 3
Divide.

1. $12 \div 4 = $\_\_\_\_\_\_
2. $8 \div 4 = $\_\_\_\_\_
3. $20 \div 4 = $\_\_\_\_\_

4. $28 \div 4 = $\_\_\_\_\_
5. $24 \div 4 = $\_\_\_\_\_
6. $4 \div 4 = $\_\_\_\_\_

7. $36 \div 4 = $\_\_\_\_\_
8. $32 \div 4 = $\_\_\_\_\_
9. $16 \div 4 = $\_\_\_\_\_

10. $41 \div 16 = $\_\_\_\_\_\_
11. $41 \div 28 = $\_\_\_\_\_\_
12. $41 \div 14 = $\_\_\_\_\_\_
13. $41 \div 20 = $\_\_\_\_\_\_
14. $41 \div 40 = $\_\_\_\_\_\_

ALGEBRA Complete.

20. Rule: Multiply by 4
   |
   \n
<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>7</td>
<td>28</td>
</tr>
</tbody>
</table>

21. Rule: Divide by 4
   |
   \n
<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>24</td>
<td>6</td>
</tr>
</tbody>
</table>

22. Rule: Divide by 4
   |
   \n
<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>36</td>
<td>9</td>
</tr>
</tbody>
</table>

ALGEBRA Find each missing number.

9. $12 \div 3 = $\_\_\_\_\_\_
10. $40 \div 4 = $\_\_\_\_\_\_

11. $20 \div 4 = $\_\_\_\_\_\_
12. $24 \div 6 = $\_\_\_\_\_\_

ALGEBRA Complete the table.

13. Rule: Divide by 4
    |
    \n
    | Input | Output |
    |-------|--------|
    | 8     | 12     |
    | 16    | 20     |
    | 28    | 32     |

Solve. Use the data from the pictograph.

23. How many third-grade students went on the school trip?
   24 students

24. There were 32 fourth-grade students on the school trip. How many symbols would you show on the graph for the fourth-grade students? Draw the symbols on the graph.
   8 symbols

School Trip to the Planetarium

Grade | Number of Students
--- | ---
3 | 4
4 | 4

Each \( \frac{4}{4} \) stands for 4 students.
1. The blacksmith made 32 new wheels for the wagons. Each wagon needs 4 wheels. There are 8 wagons with new wheels.

2. The blacksmith also made 40 horse shoes. Since each horse gets 4 shoes, 10 horses got new shoes.

3. The pioneers will carry barrels of water on the trip. They will take a total of 36 gallons of water. There are eight wagons making the trip. Only 4 of the wagons will carry water. Each barrel will hold 9 gallons.

4. A boat rental shop rents paddleboats that can hold up to 4 riders. The shop has enough paddleboats for up to 28 people. How many paddleboats does the shop have? 7 paddleboats

5. A grocery store shelf can hold 4 large boxes of laundry detergent. The store clerk put 25 boxes of laundry on the shelves. What is the least number of shelves needed for the display? Explain. 7; 25 ÷ 4 = 6 shelves, but there are 25 boxes, so the clerk needs another shelf for the last box.

6. Of the $24 in equal amounts to his 4 friends, Melissa lent $18 in equal amounts to 3 of her friends. How much did each friend lend? Explain. $3 to each friend; 24 ÷ 4 = 6 and 18 ÷ 3 = 6.

7. Eric pumps the front tire of his bike to 32 pounds. Each push of the pump puts 4 pounds of air into the tire. How many times must Eric push the pump to fill the tire? 8 times

8. The Finos have a carton of 12 eggs. If the family eats four eggs a day, how long will they have eggs to eat? 3 days

9. The pioneers are getting ready to cross the prairie. Look at the numbers above each part of the story. Use the numbers to fill in the blanks so that each story part makes sense.

10. They both lent $56 to each of 4 of his friends, Melissa lent $36 in equal amounts to 3 of her friends. Who lent each friend more money? Explain. They both lent $6 to each friend; 24 ÷ 4 = 6 and 18 ÷ 3 = 6.
### Make a Table Strategy

#### Which day had the most sign-ups?

**Sign-Up: After-School Games**

<table>
<thead>
<tr>
<th>Day</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Jim, Barry, Chris, Seth, Eli, Taylor, Ron, Tiffany, Josh, Donna, Bryan</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Ann, Steve, Tara, Pete, Lily, Aiko, Warren, Ian, Craig, Sereka</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Tod, Bailey, Carly, Sudi, Donna, Jani, Beth</td>
</tr>
</tbody>
</table>

### Step 1 Understand

- **Be sure you understand the problem.**
  - Read carefully.
  - What do you know?
    - There are 3 days for after-school games.
    - There is a list of names for each day.
  - What do you need to find out?
    - You need to find out which day had the most sign-ups.
    - To do this, you need to know how many sign-ups were each day.

### Step 2 Plan

- **Make a plan.**
  - A table can help you organize what you know.
  - Make a table to solve the problem.

### Step 3 Solve

**Make a table.**

Tally the names for each day. Write the total number of tallies for each day. Compare the tallies for each day.

Complete the table.

<table>
<thead>
<tr>
<th>Day</th>
<th>Tally</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>J J</td>
<td>11</td>
</tr>
<tr>
<td>Tuesday</td>
<td>J J</td>
<td>10</td>
</tr>
<tr>
<td>Wednesday</td>
<td>J J J</td>
<td>7</td>
</tr>
</tbody>
</table>

- There are 11 sign-ups for Monday, 10 sign-ups for Tuesday, and 7 sign-ups for Wednesday.

**Monday** had the most sign-ups.

### Step 4 Check

- **Is the solution reasonable?**
  - Reread the problem.
  - Does your answer match the data given in the problem? **Answers may vary.**

What other strategy could you use to solve the problem? **Possible answer: Write a number sentence.**

### Solve. Use the make a table strategy.

1. Donna is making a sign that says “Greetings, Chess Masters!” Which letter does she use the most? **the letter S**

2. Four friends were in a tournament. Judy came in sixth, Sam was ninth, Tim was third, Evelyn was fifth. In what order did the friends finish? **Tim, Evelyn, Judy, Sam**
Chapter Resources

Problem-Solving Strategy

**Answers (Lesson 7-3)**

**Homework Practice**

1. Mr. Frank is planning a parade. First, 36 musicians will march and play. Second, 32 soldiers will march in uniform; third, 28 horses will join. Fourth, will be clowns. If the pattern continues, how many clowns will walk in the parade? **24 clowns**

2. Every time Mr. Frank buys 4 pots of flowers for the float, the flower shop will give him 1 pot free. After 4 weeks, he had 50 pots of flowers. How many pots did he get free? **10 pots**

3. Mr. Frank is collecting money to rent the parade floats that will cost $40. He has $24 so far. How long will it take to have enough money if he collect $4 a week? **4 weeks**

4. There are a total of 30 floats for the parade. The parade will last 60 minutes. Mr. Frank wants the floats to travel at an equal pace throughout the parade. How many floats should travel through the parade in 30 minutes? **15 floats**

5. There are 28 horses in the parade. They are walking in rows, with 4 horses in each row. How many rows of horses are in the parade? **7 horses**

6. For every float, Mr. Frank wants 6 people. If there are 20 floats, how many people will Mr. Frank need? **120 people**

**Spiral Review**

Divide. (Lesson 7–2)

7. **24 ÷ 4** 6

8. **4 ÷ 4** 1

9. **28 ÷ 4** 7

10. **0 ÷ 4** 0

11. **36 ÷ 4** 9

12. **16 ÷ 4** 4

**Skills Practice**

Problem-Solving Strategy

Organize the data below in a table.

| My Favorite Game          | Computer: Jessica, Michael, Akiko, Taylor, Aretha, Jamal, Rick, Paula | Board: Erica, Lauren, Mark, Andrew, Allison | Card: Justin, Carl, Dixie, Ben |

<table>
<thead>
<tr>
<th>Game</th>
<th>Tally</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Card</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use your table to solve problems 1 and 2.

1. Which game got the most votes? **computer games**

2. Which game got the fewest votes? **card games**

For Exercises 3 and 4, use the shapes that Lorna drew.

3. How many more stars than circles did Lorna draw? Make a table in the box.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Tally</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>square</td>
<td>III 3</td>
<td></td>
</tr>
<tr>
<td>circle</td>
<td>III 3</td>
<td></td>
</tr>
<tr>
<td>star</td>
<td>II 4</td>
<td></td>
</tr>
</tbody>
</table>

1 more

4. Suppose that Lorna draws 2 more squares. How many squares will she have then? **5 squares**
Divide by 6 and 7

You can make groups to help you divide.

Suppose you have 28 wildflowers. You want to make 7 groups of wildflowers. How many wildflowers will you have in each group?

<table>
<thead>
<tr>
<th>Number in All</th>
<th>Number of Groups</th>
<th>Number in Each Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

So, $28 \div 7 = 4$.

Complete the division sentence for each picture.

1. $30 \div 6 = 5$
2. $35 \div 7 = 5$

Divide.

3. $54 \div 6 = 9$
4. $48 \div 6 = 8$
5. $56 \div 7 = 8$
6. $42 \div 6 = 7$
7. $28 \div 7 = 4$
8. $18 \div 3 = 6$
9. $30 \div 6 = 5$
10. $12 \div 6 = 2$
11. $42 \div 7 = 6$
12. $6 \div 2 = 3$
13. $18 \div 6 = 3$
14. $7 \div 7 = 7$
15. $7 \div 7 = 1$
16. $6 \div 2 = 3$
17. $7 \div 7 = 1$
Divide.

1. $12 \div 6 = \underline{2}$
2. $35 \div 7 = \underline{5}$
3. $24 \div 6 = \underline{4}$

4. $7 \div 7 = \underline{1}$
5. $30 \div 6 = \underline{5}$
6. $42 \div 7 = \underline{6}$

7. $18 \div 6 = \underline{3}$
8. $56 \div 7 = \underline{8}$
9. $54 \div 6 = \underline{9}$

10. $48 \div 6 = \underline{8}$
11. $21 \div 7 = \underline{3}$
12. $63 \div 9 = \underline{7}$

13. $7 \div 2 = \underline{3}$
14. $6 \div 6 = \underline{1}$
15. $7 \div 49 = \underline{1}$
16. $6 \div 24 = \underline{1}$
17. $6 \div 18 = \underline{2}$

18. $6 \div 18 = \underline{3}$
19. $7 \div 63 = \underline{1}$
20. $7 \div 21 = \underline{1}$
21. $6 \div 42 = \underline{1}$
22. $7 \div 14 = \underline{1}$

23. $7 \div 28 = \underline{1}$
24. $7 \div 49 = \underline{1}$
25. $6 \div 36 = \underline{1}$
26. $6 \div 30 = \underline{1}$
27. $7 \div 70 = \underline{1}$

ALGEBRA Compare. Write $>$, $<$, or $=$.

28. $28 \div 7 \underline{<} 5$
29. $49 \div 7 \underline{>} 7$
30. $49 \div 7 \underline{<} 8$

31. $7 \div 7 \underline{=} 6 \div 6$
32. $42 \div 7 \underline{=} 42 \div 7$
33. $35 \div 7 \underline{=} 30 \div 6$

34. $24 \div 3 \underline{>} 24 \div 6$
35. $56 \div 8 \underline{<} 9$
36. $36 \div 6 \underline{=} 54 \div 9$

Solve.

37. Alberto plants 42 tree seedlings in 6 rows. Each row has the same number of tree seedlings. How many rows of tree seedlings does Alberto plant?

7 rows

38. Six park rangers take 54 people on a tour of Great Bear National Park. Each ranger has the same number of tourists. How many people are in each group?

9 people

ALGEBRA Complete the table.

11. Rule: Divide by 6

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>42</td>
<td>7</td>
</tr>
</tbody>
</table>

12. Rule: Divide by 7

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>7</td>
</tr>
<tr>
<td>56</td>
<td>8</td>
</tr>
<tr>
<td>35</td>
<td>5</td>
</tr>
<tr>
<td>42</td>
<td>6</td>
</tr>
<tr>
<td>63</td>
<td>9</td>
</tr>
</tbody>
</table>

Solve. Use the make a table strategy. (Lesson 7–3)

13. Rides at an amusement park cost $24 for every 6 people. If a group of 12 people go to the amusement park, how much will they pay?

$48

14. Renee is saving her money to buy a t-shirt that costs $16. She saves $3 the first week, $5 the second week, $2 the third week, and $3 the fourth week. How much more money will she need to save?

$3
Problem-Solving Practice

Divide by 6 and 7

1. Len will put 18 goldfish into 6 fishbowls. Each bowl will have the same number of fish. How many goldfish will go in each bowl?

**3** goldfish

2. There are 14 customers standing in 7 checkout lines. Each line has the same number of customers. How many customers are in each line?

**2** customers

3. There are 54 cards in a card game. All of the cards are dealt out to the players. Each player gets 6 cards. How many players are in the game?

**9** players

4. The winning team scored 49 points. There were 7 players on the team. If each player scored the same number of points, how many points did each player score?

**7** points

5. Mother is making 6 goody bags for Leroy’s party. She will put 24 apple fruit rolls and 24 cherry fruit rolls into the bags. If she puts the same number in each bag, how many fruit rolls will be in each goody bag?

**8** fruit rolls

6. There are 7 cupcakes for the party. Each cupcake has 1 candle for each year of the birthday boy’s age. There is also an extra candle on each cupcake for good luck. If 49 candles were used on the cupcakes, how old is the birthday boy? Explain.

**6**; \(\frac{49}{7} = 7\) candles on each cupcake; \(7 - 1\) candle for good luck is 6 years old.

Enrich

Divide by 6 and 7

You will need a blue, yellow, and black crayon or colored pencil. Use blue to color all the butterflies with dividends that can be divided by 6. Use yellow to color all the butterflies with dividends that can be divided by 7. Circle the butterflies with dividends that can be divided by 6 or 7. Draw black dots on butterflies that cannot be divided by either 6 or 7.

List the dividends divisible by 6 from least to greatest.

12, 18, 24, 30, 36, 42, 48, 54, 60

List the dividends divisible by 7 from greatest to least.

70, 56, 49, 42, 35, 28, 21, 14, 7
Divide by 8 and 9

Find 40 ÷ 8.
Skip count to divide. So, 40 ÷ 8 = 5.

Find 45 ÷ 9.
Skip count on the number line to find the answer.
Draw arrows on the number line to show your work.
Then complete the number sentence.

1. 32 ÷ 8 = 4

2. 36 ÷ 9 = 4

ALGEBRA Complete the tables.


<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>8</td>
</tr>
<tr>
<td>81</td>
<td>9</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>7</td>
</tr>
<tr>
<td>72</td>
<td>8</td>
</tr>
<tr>
<td>54</td>
<td>6</td>
</tr>
<tr>
<td>81</td>
<td>9</td>
</tr>
</tbody>
</table>

Divide.

1. 18 ÷ 9 = 2
2. 24 ÷ 8 = 3
3. 36 ÷ 9 = 4
4. 72 ÷ 8 = 9
5. 54 ÷ 9 = 6
6. 40 ÷ 8 = 5
7. 8 ÷ 8 = 1
8. 27 ÷ 9 = 3
9. 81 ÷ 9 = 9

22. How many third-grade students volunteered for the Clean-Up Squad?

40 students

23. If 56 fourth-grade students volunteer, how many symbols should you show on the graph? Draw the symbols.

7 symbols

Each stands for 8 students.
Problem-Solving Practice
Divide by 8 and 9

1. A group of 8 children go to the fair. They share 16 balloons equally. How many balloons does each child get?
   \[ \frac{16}{8} = 2 \text{ balloons} \]

2. A group of 9 people go on 27 rides at the fair. Each one goes on the same number of rides. How many rides does each person go on?
   \[ \frac{27}{9} = 3 \text{ rides} \]

3. Marta bought 48 pieces of silverware. She puts them in a tray with 8 sections. Each section has the same number of pieces. How many pieces of silverware are in each section of the tray?
   \[ \frac{48}{8} = 6 \text{ pieces} \]

4. Mina sets the dining room table. Every night she puts out 45 dishes for 9 places at the table. How many dishes are set at each place?
   \[ \frac{45}{9} = 5 \text{ pieces} \]

5. Ty and Shaheed each have 36 rocks. They put their rocks together in a box. The box has 9 sections. If they put the same number of rocks in each section, how many rocks are in each section?
   \[ \frac{36 + 36}{9} = 8 \text{ rocks in each section} \]

6. A mural in the aquarium shows octopuses and starfish. Each starfish has 5 arms. Each octopus has 8 legs. There are 20 starfish arms in all. The combined number of starfish arms and octopus legs is 60. How many octopuses are in the mural?
   \[ \frac{60 - 20}{8} = 5 \text{ octopuses} \]
### Reteach

**Determine Unit Cost**

**Unit cost is the cost for one item. To find unit cost, use division.**

Jason wants to buy 1 marker. The price for 5 markers is $0.50. How much will it cost to buy only one marker?

**Step 1**
What do you know?
- 5 markers cost 50¢.
- The total cost is 50¢.
- The number of items is 5.

**Step 2**
Divide the total cost by number of items.

\[
\frac{50}{5} = 10
\]

It will cost 10¢ for one marker.

Find each unit cost.

1. 3 t-shirts for $27 **$9**
2. 2 hats for $12 **$6**
3. 4 gym shorts for $24 **$6**
4. 3 pairs of socks for $3 **$1**
5. 3 lunches for $6 **$2**

**Solve.**

6. Liz has $60 to buy 6 teddy bears. The teddy bears are $8 each. What is her change? **$12**

7. Cornbread muffins are $12 for a dozen. If Simon wants to buy 5 muffins, how much will they cost? **$5**

---

### Enrich

**Divide by 8 and 9**

Divide the number in the shaded part of the circle by the number in the center. Write the answer in the outer part of the circle.

1. 4
2. 8
3. 10

**4. How can you check your answers?**

**multiply the answer times the number in the center**

Show an example of how to check 72 ÷ 9.

\[
9 \times 8 = 72
\]
Find each unit cost.
1. 3 bananas for $3 $1
2. 6 apples for $6 $1
3. 1 pad of paper for $3 $3
4. 3 posters for $21 $7
5. 2 basketballs for $20 $10
6. 5 balloons for $5 $1

Find the unit cost to determine the better buy.
7. 5 teddy bears for $30 2 teddy bears for $18 5 teddy bears for $30
8. 10 tickets for $20 3 tickets for $9 10 tickets for $20

ALGEBRA Find the number of items. Then, complete the table.

<table>
<thead>
<tr>
<th>Number of Items</th>
<th>Input, Total Cost</th>
<th>Output, Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>$40</td>
<td>$5</td>
</tr>
<tr>
<td></td>
<td>$48</td>
<td>$6</td>
</tr>
<tr>
<td></td>
<td>$32</td>
<td>$4</td>
</tr>
<tr>
<td></td>
<td>$8</td>
<td>$1</td>
</tr>
<tr>
<td></td>
<td>$56</td>
<td>$7</td>
</tr>
<tr>
<td></td>
<td>$72</td>
<td>$9</td>
</tr>
</tbody>
</table>

Solve.

6. Sally has $10. Ice cream treats are 5 for $5. She buys 3 ice cream treats. How much change will she receive? $7

Spiral Review

Divide. (Lesson 7–5)

7. 18 ÷ 9 2
8. 54 ÷ 9 6
9. 63 ÷ 9 7
10. 36 ÷ 9 4
11. 27 ÷ 9 3
12. 45 ÷ 9 5
13. 90 ÷ 9 10
14. 72 ÷ 8 9
15. 81 ÷ 9 9
16. 40 ÷ 8 5
17. 56 ÷ 8 7
18. 64 ÷ 8 8
Problem-Solving Practice

Determine Unit Cost

Solve by finding each unit cost.

1. Dave is going camping with his family. Sleeping bags are on sale for $27. He has to buy 3 to get the sale price. One sleeping bag costs $10. Dave needs 5 sleeping bags. Would Dave save money if he got 6 sleeping bags?

No

2. Dave has to buy 1 flashlight for each of the 5 members of his family. He spent $50. How much did each flashlight cost?

$10

3. Dave needs to find the best buy on bottled water. He can get a case of 48 bottles for $24, or he can get 5 cases of 10 bottles for $3 a case. Which is the better buy?

5 cases of 10 bottles for $3 a case

4. Dave bought 3 lunches for $15. How much would it cost for 1 lunch if each lunch cost the same amount?

$5

5. The campground charges $21 a week. How much does 1 day cost?

$3

6. Dave's family spent $27 on gasoline to drive to the campground. They used 9 gallons of gasoline. How much did gas cost per gallon?

$3

Enrich

Jody's Birthday

Read the problems and solve them.

1. Jody took three friends to the movies for her birthday. She handed the ticket salesperson $16. She bought four children's tickets. She did not get any change back. How much did each ticket cost?

$4

2. Jody's dad said he would buy popcorn and a drink for everyone in the group. There were four children and Jody's dad. The woman at the counter said it would cost $10. How much did the popcorn and drink for each person cost?

$2

3. Jody's friend Amy surprised Jody with a granola bar. She paid $2.00 and got $0.25 in change. How much did one granola bar cost?

$1.75

4. After the movie, Jody's dad took the four children to play miniature golf. He handed the salesperson $20 and got $8 change back. How much was it for each child's miniature golf ticket?

$3
Choose the best strategy.

Alicia wants to mail 12 letters and 5 postcards. A page of 6 stamps to mail letters costs $2, and a page of 5 stamps to mail postcards costs $1. Alicia has a $10-bill. How much change will she get after paying for the stamps?

Step 1 Understand

What do you know? You know that Alicia has 12 letters and 5 postcards to mail. You also know that it costs $2 for 6 letter stamps and $1 for 5 postcard stamps. Alicia will pay with a $10-bill.

What do you need to find? How much change will Alicia get after paying for the stamps?

Step 2 Plan

Choose a strategy.

Making a table will help organize the facts. The table will have two columns, one for letter stamps and one for postcard stamps. The cost will be listed in the rows.

Then, total the cost and subtract it from $10 to find the amount Alicia will get back in change.

Step 3 Solve

<table>
<thead>
<tr>
<th>Letter Stamps</th>
<th>Postcard Stamps</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2 for 6</td>
<td>$1 for 5</td>
</tr>
<tr>
<td>$2 for 6</td>
<td></td>
</tr>
</tbody>
</table>

Total: $4 for 12 letter stamps + $1 for 5 postcard stamps = $5

$10 – $5 = $5

So, Alicia will get $5 in change.

Use any strategy shown below to solve. Tell what strategy you used.

• Act it out
• Draw a picture
• Look for a pattern
• Make a table

1. What is the next number in the pattern?

53, 58, 63, 68

73: look for a pattern

2. Margie and Jill have 35 bottles of juice. Margie drinks 2 bottles a day, and Jill drinks 3.

How many days will the juice last?

7 days: make a table

3. Juan planted 20 seeds. For every 5 seeds he planted, 4 grew into plants. How many plants did Juan have?

16: draw a picture
Solve. Use any strategy.

1. **ALGEBRA** What is the next number in the pattern?
   50, 48, 46, 44, __42__, 40

2. Evita is arranging pictures on the wall. She put 3 pictures on
   the top row. Then, she put 6 pictures on the second row. She
   put 9 pictures on the third row. She continues this pattern for
   2 more rows. How many pictures does Evita have in all?
   __45 pictures__

3. Russ and Marty bought wood for a tree house. They bought 8
   long pieces of wood. Each piece cost $5. How much did they
   spend altogether?
   $40

4. The boys have 8 long pieces of wood. They need 24 shorter
   pieces of wood of equal length. How many parts should they
   saw each long piece of wood into?
   __3 pieces__

5. The boys bought 4 pounds of nails for $16. They got $4 in
   change. How much money did they start with?
   __$20__

6. The boys want to buy shingles for their roof, and they have
   $40 left. If they spend all of their money and get 10 shingles,
   how much did each shingle cost?
   __$4__

Find each unit cost. (Lesson 7–6)

5. 4 balls for $12 __$3__
6. 5 notebooks for $5 __$1__
7. 2 paint sets for $6 __$3__

Find each unit cost to determine the better buy.

8. 10 ice pops for $10 __10 ice pops for $10__
9. 6 books for $18 __6 books for $18__

Solve. Use any strategy.

1. Cindy and Pam bought 6 roses for their mother. Roses cost
   $10 for 10. How much did they spend altogether?
   __$6__

2. Cindy decided to grow her own roses. One rose bush cost
   $20 and produced 10 roses. Since Cindy paid $10 for 10
   roses the year before, did Cindy save money this year by
   growing her own roses? Explain. __no__

   __10 roses for $20 is $2 per rose; 10 roses for $10 is $1 per rose__

3. **ALGEBRA** What is the next number in the pattern?
   72, 75, 78, 81, __84__

4. Sue and her brother Bill were given a case of 30 juice drinks.
   Sue drinks 2 a day and Bill drinks 1 a day. How long will the
   case of drinks last? __10 days__

Spiral Review

Grade 3 40  Chapter 7
Reteach
Algebra: Expressions and Equations
7–8
3AF1.1, 3AF1.2

An **expression** is a number sentence that contains numbers, variables, and at least one operation symbol.

An **equation** is a mathematical sentence that contains an equals sign.

Is \(2 + 3\) an expression? **Yes**

Why? **It contains numbers and an operation symbol.**

Is \(= 5\) an expression? **No**

Why? **You need more than one number, and \(=\) is not an operation.**

Is \(2 + 3 = 5\) an equation? **Yes**

Why? **It contains numbers and an operation symbol.**

Write an expression and create an equation for the situation.

1. In the playground, there are 2 swing sets with 3 swings for older children and 6 swing sets with 1 swing each for younger children. Write an expression that shows that younger children have the same amount of swings as the older ones.

\[2 \times 3 = 6 \times 1\]

Choose one of the symbols \(+, -, \times,\) or \(\div\) to make the equation true.

2. \(5 - 3 = 2 \times 1\)

3. \(27 + 3 = 3 \times 10\)

4. \(10 + 20 = 30\)

5. \(49 \div 7 = 7\)
Write an expression and create an equation for each situation.

1. Juan had 8 train cars. He lost 2. Then he received 4 cars for his birthday. How many cars does Juan have now?
   \[ 8 - 2 + 4; \quad 8 - 2 + 4 = 10 \text{ cars} \]

2. There are 20 action figures and 5 boys. If everyone has equal amounts, how many figures can each boy have to play with?
   \[ 20 \div 5; \quad 20 \div 5 = 4 \text{ action figures} \]

3. Alma has a collection of 25 dolls from around the world. She sold 2 dolls. Her aunt gave her a new set of 6 Japanese dolls. How many dolls does Alma have now?
   \[ 25 - 2 + 6; \quad 25 - 2 + 6 = 29 \text{ dolls} \]

Choose one of the symbols +, −, ×, or ÷ to make the equation true.

4. \[ 25 \quad \times \quad 5 = 4 \times 5 \]
5. \[ 80 \quad - \quad 8 = 9 \times 8 \]
6. \[ 14 \quad \div \quad 2 = 6 \quad + \quad 1 \]
7. \[ 56 \quad \div \quad 6 = 10 \times 5 \]
8. \[ 20 \quad - \quad 4 = 8 \quad \times \quad 2 \]
9. \[ 4 \quad \times \quad 6 = 20 + 4 \]
10. \[ 70 \quad + \quad 2 = 9 \quad \times \quad 8 \]
11. \[ 18 \quad \div \quad 2 = 3 \quad \times \quad 3 \]

Find a number that makes the equation true.

12. \[ 9 \quad \times \quad 3 = 25 \quad + \quad 2 \]
13. \[ 9 \quad \times \quad 9 = 80 \quad + \quad 1 \]
14. \[ 3 \quad \times \quad 3 = 7 \quad + \quad 2 \]
15. \[ 6 \quad \times \quad 9 = 50 \quad + \quad 4 \]
16. \[ 8 \quad \times \quad 3 = 22 \quad + \quad 2 \]
17. \[ 4 \quad \times \quad 4 = 8 \quad + \quad 8 \]

Write an expression and an equation for each situation.

1. Meg has 10 books. She was given 2 more for her birthday. How many books does Meg have now?
   \[ 10 + 2; \quad 10 + 2 = 12 \]

2. There are 12 dolls and 4 girls. If everyone has equal amounts, how many dolls can each girl have?
   \[ 12 \div 4; \quad 12 \div 4 = 3 \]

Choose one of the symbols +, −, ×, or ÷ to make the equation true.

3. \[ 15 \quad - \quad 5 = 2 \times 5 \]
4. \[ 50 \quad - \quad 8 = 6 \times 7 \]
5. \[ 9 \quad \times \quad 8 = 79 - 7 \]
6. \[ 24 \quad \div \quad 6 = 32 \div 8 \]

Find a number that makes the equation true.

7. \[ 7 \quad \times \quad 3 = 23 \quad - \quad 2 \]
8. \[ 7 \quad \times \quad 9 = 30 + 33 \]
9. \[ 8 \quad \times \quad 7 = 60 \quad - \quad 4 \]
10. \[ 7 \quad \times \quad 6 = 37 + 5 \]

Solve. Use any strategy. (Lesson 7–7)

11. Jerry spent $2 on a drink, $3 on a pretzel, and $5 on a ticket to see the movie. He got $10 in change. How much money did he start with?
   \[ $20 \]

12. Lindy’s class has 3 more students than Pablo’s class. Pablo’s class last year had 6 more students than it does this year. This year, Pablo’s class has 20 students. How many students are in Lindy’s class this year?
   \[ 23 \text{ students} \]
Problem-Solving Practice

Algebra: Expressions and Equations

Write an expression and an equation for each situation.

1. The Lopez family of 4 went camping 5 years in a row. Every year they brought 2 different guests. How many guests did they bring altogether?
   
   \[ 5 \times 2; 5 \times 2 = 10 \text{ guests} \]

2. The Lopez family has 3 tents, and each tent has room for 3 people. How many people do they have room for altogether?
   
   \[ 3 \times 3; 3 \times 3 = 9 \text{ people} \]

3. There are 20 campers in each section of the camp ground, with an equal number in each section. There are 4 sections. How many campers are in each section?
   
   \[ 20 \div 4; 20 \div 4 = 5 \text{ campers} \]

4. Over the 5 years that the Lopez family went camping, they made 8 new friends each year. How many new friends did they make altogether?
   
   \[ 5 \times 8; 5 \times 8 = 40 \text{ friends} \]

5. Thirty-two of the Lopez family’s new friends came from 4 different states, with the same number from each state. How many came from each of the states?
   
   \[ 32 \div 4; 32 \div 4 = 8 \text{ friends} \]

Enrich

Write the Sign

Write \(+, -, \times, \text{ or } \div\) in each circle to make each number sentence true.

(Hint: Start at the left of each sentence unless there are parentheses. Do operations in parentheses first.)

1. \( (6 + 1) \div 1 = 7 \)
2. \( (9 + 3) \div 3 = 6 \)
3. \( (6 \times 4) \div 1 = 24 \)
4. \( (5 \times 4) \div 5 = 4 \)
5. \( (8 \div 2) \times 4 = 16 \)
6. \( (9 \times 2) \div 6 = 3 \)
7. \( (7 - 4) \times 7 = 21 \)
8. \( (7 + 5) \div 3 = 4 \)
9. \( 20 \div (8 + 2) \times 5 = 10 \)
10. \( (15 \div 5) \div (3 + 2) = 2 \)

Write \(>, <, \text{ or } =\) in each circle to make each number sentence true.

(Hint: Start at the left of each sentence unless there are parentheses. Do operations in parentheses first.)

11. \( (2 \times 7) > (21 \div 3) \)
12. \( (6 \div 2) \times 8 = (6 \times 4) \)
13. \( (10 + 2) + 1 < 7 \times 2 \)
14. \( 0 \times (9 \div 3) < (9 \div 3) \times 1 \)
15. \( 7 \div (7 + 7) = 7 \)
16. \( (5 \times 5) > (6 \times 4) \)
17. \( (7 + 8) \div 3 < 15 \times 1 \)
18. \( 0 + 4 > 4 \div 4 \)
Elena went to the beach 6 times this month. Dolores went to the beach 4 more times than Elena did. Write an expression that shows the amount of times Dolores went to the beach.

**Step 1**
Reread the problem and find the key words that will tell you what operation to use.

Dolores went 4 more times

The word *more* means addition.

**Step 2**
Put the numbers with the operation.

Elena went 6 times. Dolores went 4 more times.

6 + 4 = 10 Dolores went to the beach 10 times.

**Write each phrase as an expression. Then solve.**

1. the difference between 23 and 46
   
   \[23 - 46; 23\]

2. 56 together with 6
   
   \[56 + 6; 62\]

3. 3, 4, and 5 items in all
   
   \[3 + 4 + 5; 12\]

4. 4 less than 12
   
   \[12 - 4; 8\]

5. the product of 4 and 5
   
   \[4 \times 5; 20\]

6. 7 times 4
   
   \[7 \times 4; 28\]

7. 18 minus 10
   
   \[18 - 10; 8\]

8. 20 divided by 4
   
   \[20 \div 4; 5\]

**Write equations for the situation. Then solve.**

9. Jen fed the family dog once a day for 15 days. Her brother fed the dog twice a day for 10 days. Who fed the dog more?

   Jen: 1 \times 15 = 15 times Jen fed the dog. Brother: 10 \times 2 = 20 times feeding the dog. Jen’s brother fed the dog more.
Write each phrase as an expression.

1. 56 students divided equally among 7 tables ____________ 56 ÷ 7
2. the total of 7 classes of 10 students ____________ 7 + 10
3. 65 less than 75 ____________ 75 – 65
4. 25 more than 50 ____________ 25 + 50
5. difference between 34 and 30 ____________ 34 – 30
6. run 2 times a day for 30 minutes each time ____________ 2 × 30
7. the product of 9 and 8 ____________ 9 × 8
8. 4 boxes each have 6 books ____________ 4 × 6

Write phrases for each expression.

9. 25 ÷ 5 ____________ 25 peaches divided between 5 people
10. 7 × 8 ____________ 7 sodas in 8 cases, 7 erasers in 8 boxes

Spiral Review

Choose one of the symbols +, −, ×, or ÷ to make the equation true. (Lesson 7–8)

11. 65 ( ) = 10 × 6
12. 64 ÷ 8 = 8 ( ) 1

Find a number to make the equation true.

13. 6 × 4 = ______ 2
14. 9 × 9 = 50 + ______ 31
15. 8 × 6 = ______ 57 9
16. 7 × 9 = 50 + ______ 13

Write an expression for each situation. Then find the value of the expression to solve.

1. Eva has $10 more than Trina. Trina has saved $2 each day for a week. How much money does Eva have?
   ______ $2 × 7 = $14 + $10 = $24

2. Berto is 10 years older than Suna. Suna is 15 years old. How old is Berto?
   ______ 10 + 15 = 25 years old

3. Molly will be on vacation at the beach with Ana for 8 days. Tino will join them for half of the time that they are at the beach. How long will Tino stay at the beach?
   ______ 8 ÷ 2 = 4 days

4. At 4:00 P.M. in the afternoon, there were only 4 bikes left in the bike rack at school. At noon, there were 10 times that many bikes in the rack. How many bikes were in the rack at noon?
   ______ 4 × 10 = 40 bikes

5. Each package of chicken soup mix serves 6 people. Ruby wants to serve 36 people chicken soup. How many packages of soup should she buy?
   ______ 36 ÷ 6 = 6 packages

6. Mrs. Perez bought 27 balloons. If 9 children come to her son’s birthday party and she divides the balloons equally, how many balloons will each child bring home?
   ______ 27 ÷ 9 = 3 balloons
Read and solve the problems. Then write a true number sentence for each.

1. There are 10 students in two classes going on a special field trip. Four teachers are going with them. The teachers divided the students into equal groups. There will be one teacher with each group. How many students are in each group?

   \[
   5 \text{ students; } 20 \div 4 = 5
   \]

2. Matt had a total of 30 baseball cards. He gave 9 to his brother and 6 to his friend. How many baseball cards does he have left?

   \[
   15 \text{ baseball cards; } 30 - 15 = 15
   \]

3. Paula is studying for her social studies test. She plans to read 35 pages in one week. She is going to read the same number of pages each day. How many pages will she read each day?

   \[
   5 \text{ pages; } 35 \div 7 = 5
   \]

4. There are 4 more students in the band than in the school choir. The total number of students in both groups is 24. How many students are in the band?

   \[
   14 \text{ students; } 20 \div 2 = 10. \text{ Next I added } (10 + 4) + 10 \\
   \text{ and got } 24. (10 + 4) + 10 = 24
   \]

5. Martin is 7 years older than Pedro. The sum of their ages is 15. How old is Pedro?

   \[
   \text{Pedro is } 4; 11 + 4 = 15
   \]

Using the word bank below, complete each sentence by writing the correct word or words in the blank.

- unit cost
- equation
- numerical expression
- divisible
- array
- subtraction

1. A(n) _____ is a mathematical sentence that contains an equal sign, =, indicating that the left side of the equal sign has the same value as the right side.

2. _____ is an operation that tells the difference, when some or all are taken away.

3. The word _____ describes a number that can be divided into equal parts.

4. Objects or symbols displayed in rows of the same length and columns of the same length are known as an _____.

5. A _____ is an expression that contains numbers and at least one operation.

6. The price for one item is the _____.
Grade 3

Chapter 7

Oral Assessment

Place 10 paper clips, 4 erasers, and 20 pencils in individual containers. Label the container with the paper clips “10 for $20.” Label the container with the erasers “4 for $24.” Finally, label the container with the pencils “5 for $20.”

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

1. If someone purchased 5 paper clips and 10 pencils, how much would it cost?
   
   Sample answer: I divided the total price by the number of objects for that price.

2. What is the unit cost per paper clip?
   
   $2

3. What is the unit cost per eraser?
   
   $6

4. What is the unit cost per pencil?
   
   $4

5. Tell how you got your answer.
   
   Sample answer: I divided the total price by the number of objects for that price.

6. If someone wanted to buy 4 paper clips and 5 pencils, how much would it cost?
   
   $28

7. Explain your answer.
   
   Sample answer: The unit cost of the paper clips is $2. Four paper clips cost $8. Five pencils cost $20. $8 + $20 = $28

8. Pablo and Rose went to the store to buy paint for an art project. They chose 8 colors. They spent $40. How much did each bottle of paint cost?
   
   $5

9. If they spent $24, how much did each bottle of paint cost?
   
   $3

10. Tell how you got your answer.
    
    Divide the amount spent by the number of bottles purchased.

(Oral Assessment)
### Chapter 7 Assessment Answer Key

#### Chapter Diagnostic Assessment

**Page 54**

1. 8
2. 0
3. 4
4. 17
5. 3
6. 24
7. 6
8. 3

9. \(8 \div 4 = 2\). Yes.
   There are 8 slices and 4 friends.

10. 3
11. 4
12. 6
13. 10

#### Chapter Pretest

**Page 55**

1. 7
2. 4
3. 7
4. 8
5. 9
6. 5
7. 7
8. 10
9. $1
10. $2
11. $9
12. $5

13. \(15 \div 3 = 5\)
14. \(28 \div 4 = 7\)

#### Quiz 1 (7–1 through 7–3)

**Page 56**

1. 8
2. 6
3. 7
4. 8
5. 4
6. <
7. <

8. 5 weeks
9. 20 bowls
10. 4 years old

18. 16 books
Chapter 7 Assessment Answer Key

Quiz 2 (7–4 through 7–6)  
Page 57

1. 5
2. 4
3. 8
4. 3
5. 6
6. 2
7. 7

8. 16
   56
   3
9. 4
   $36
   $4

Quiz 3 (7–7 through 7–9)  
Page 58

1. 36 + 4
2. 10 × 3
3. 12 − 5
4. 42 ÷ 7

5. 6 sets of 4 copies of the picture would cost $60. 5 sets of 4 copies of the picture and 2 single copies would cost $58.

6. 24

7. 2 × 10

8. 12 ÷ 6

Mid-Chapter Review  
Page 59

1. D

2. F

3. C

4. G

5. B

6. an equation
   You make both sides equal.

7. division

8. The parts of an expression are the numbers and at least one operation
Chapter 7 Assessment Answer Key

Chapter Test, Form 1  Chapter Test, Form 1  Chapter Test, Form 2A
Page 65  Page 66  Page 67

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

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

(continued on the next page)
<table>
<thead>
<tr>
<th>Chapter Test, Form 2A</th>
<th>Chapter Test, Form 2B</th>
<th>Chapter Test, Form 2B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page 68</td>
<td>Page 69</td>
<td>Page 70</td>
</tr>
<tr>
<td>10. <strong>G</strong></td>
<td>1. <strong>B</strong></td>
<td>10. <strong>J</strong></td>
</tr>
<tr>
<td>11. <strong>B</strong></td>
<td>2. <strong>G</strong></td>
<td>11. <strong>A</strong></td>
</tr>
<tr>
<td>12. <strong>G</strong></td>
<td>3. <strong>C</strong></td>
<td>12. <strong>G</strong></td>
</tr>
<tr>
<td>13. <strong>D</strong></td>
<td>4. <strong>F</strong></td>
<td>13. <strong>D</strong></td>
</tr>
<tr>
<td>14. <strong>H</strong></td>
<td>5. <strong>C</strong></td>
<td>14. <strong>G</strong></td>
</tr>
<tr>
<td>15. <strong>A</strong></td>
<td>6. <strong>H</strong></td>
<td>15. <strong>C</strong></td>
</tr>
<tr>
<td>16. <strong>F</strong></td>
<td>7. <strong>B</strong></td>
<td>16. <strong>H</strong></td>
</tr>
<tr>
<td>17. <strong>B</strong></td>
<td>8. <strong>H</strong></td>
<td>17. <strong>B</strong></td>
</tr>
<tr>
<td>18. <strong>G</strong></td>
<td>9. <strong>B</strong></td>
<td>18. <strong>F</strong></td>
</tr>
<tr>
<td>19. <strong>C</strong></td>
<td></td>
<td>19. <strong>A</strong></td>
</tr>
</tbody>
</table>

(continued on the next page)
## Chapter 7 Assessment Answer Key

### Chapter Test, Form 2C

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | 8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 | 9 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 | 9 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7 | 10|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

19. 34

20. 4

21. $3$

### Chapter Test, Form 2D

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | 9 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 | 10|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 | 7 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7 | 10|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 | 8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

19. 34

20. 4

21. $3$

(continued on the next page)
Chapter 7 Assessment Answer Key

Chapter Test, Form 2D
Page 74

15. 30
16. 48
17. 2
18. 30
19. 10
20. 3

21. $2
22. 4 + 8
23. 32 ÷ 4
24. 9 ÷ 3 = 3
25. 18 − 9

Chapter Test, Form 3
Page 75

1. 4, 5, 7
2. Subtract 5
3. 8
4. 9
5. 8
6. 7
7. 10
8. 9
9. $2
10. 7
11. 5
12. 7

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13. ×
14. +
15. ×
16. −
17. −
18. 10
19. $6
20. 16 − 4
21. 28 ÷ 7
22. 54 ÷ 6 = 9
23. 22 − 5
# Chapter 7 Assessment Answer Key

## Page 77, 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>

(continued on the next page)
Chapter 7 Assessment Answer Key

Page 77, Extended-Response Test
Sample Answers

In addition to the scoring rubric found on page A32, the following sample answers may be used as guidance in evaluating open-ended assessment items.

1. a. See students’ work. Sample answer:
   You can find $27 \div 3$ by using repeated subtraction or by using an array. For repeated subtraction, you figure out
   $27 - 3 = 24; 24 - 3 = 21; 21 - 3 = 18; 18 - 3 = 15; 15 - 3 = 12; 12 - 3 = 9; 9 - 3 = 6; 6 - 3 = 3; 3 - 3 = 0$.
   You subtracted 9 times so you know that there are 9 groups of 3 in 27.
   An example of an array that can help determine $27 \div 3$ is:

   ![Array example]

   b. 10, 17, 25

   c. See students’ work. Sample answer:
      I know that $24 \div 3$ is larger than $24 \div 4$ because if you divide the same number of objects into 3 groups and 4 groups, the 4 groups will have less objects in each group.

2. See students’ work. Sample problem:
   There are 35 students in Mr. Jones’ class. He wants to divide the students evenly into 5 groups for a group project. How many students will be in each group? [Answer: 7 students]

3. a. Each guest will get 4 party favors.
   b. Each guest would get 3 party favors.

4. Answers may slightly vary. Sample answer: Unit cost is the price per item. To find unit cost, you can divide. For example: If you can get 5 cans of soup for $5, the unit cost for one can of soup is $1.
Chapter 7 Assessment Answer Key

Cumulative Standardized Test Practice

1. A
2. J
3. C
4. G
5. C
6. H
7. D
8. G
9. D
10. J
11. 2 pencils for $4
12. $18
13. 7
14. 15 + 2 = 17