Teacher’s Guide to Using the
Chapter 15 Resource Masters

The Chapter 15 Resource Masters includes the core materials needed for Chapter 15. 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 15–1. 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. 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.

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

**Assessment Options** The assessment masters in the Chapter 15 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.
Use this graphic organizer to take notes on **Chapter 15: Divide by One-Digit Numbers.**

Fill in the missing information.

<table>
<thead>
<tr>
<th>Division Term</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quotient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit Price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Student-Built Glossary

This is an alphabetical list of new vocabulary terms you will learn in **Chapter 15: Divide by One-Digit Numbers**. As you study the chapter, complete each term’s definition or description. Remember to add the page number where you found the term. Add this page to your math study notebook to review vocabulary at the end of the chapter.

<table>
<thead>
<tr>
<th>Vocabulary Term</th>
<th>Found on Page</th>
<th>Definition/Description/Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>dividend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>divisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>estimate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>quotient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>unit price</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dear Family,

Today my class started Chapter 15: Divide by One-Digit Numbers. I will be learning to divide two- and three-digit numbers. I will also be learning to divide money and estimate quotients. Here are my vocabulary words and an activity that we can do together.

Love, ________________

Key Vocabulary

dividend  A number that is being divided. In $9 \div 3$, 9 is the dividend.

divisor  The number by which the dividend is being divided. In $9 \div 3$, 3 is the divisor.

quotient  The answer to a division problem. In $12 \div 2 = 6$, 6 is the quotient.

unit price  The price of a single piece or item.

estimate  A number close to an exact value.

Activity

Use paper to write pretend receipts from shopping. Have each receipt represent a different item. For example, one receipt could show that 5 apples were purchased for $3.75. Once you have created all of your receipts, find the unit cost for each item purchased.

Books to Read

Hannah’s Collections  
by Marthe Jocelyn

The Phantom Tollbooth  
by Norton Juster

Centipede’s 100 Shoes  
by Tony Ross
Estimada familia:

Hoy mi clase comenzó el Capítulo 15: Divide entre números de un dígito. Aprenderé a dividir números de dos y tres dígitos y también a dividir dinero y estimar cocientes. A continuación, están mis palabras de vocabulario y una actividad que podemos hacer juntos.

Cariños, ____________

Vocabulario clave

dividendo El número que se divide. En \( 9 \div 3 \), 9 es el dividendo.

divisor Número entre el cual se divide el dividendo. En \( 9 \div 3 \), 3 es el divisor.

cociente Respuesta a un problema de división. En \( 12 \div 2 = 6 \), 6 es el cociente.

precio unitario El precio de una sola pieza o artículo.

estimación Número cercano a un valor exacto.

Actividad

Usen papel para escribir recibos ficticios de ventas. Hagan que cada recibo represente un artículo diferente. Por ejemplo, un recibo podría mostrar que se compraron 5 manzanas por $3.75. Una vez que hayan creado todos los recibos, calculen el costo unitario de cada artículo comprado.

Libros recomendados

Hannah’s Collections
de Marthe Jocelyn

The Phantom Tollbooth
de Norton Juster

Centipede’s 100 Shoes
de Tony Ross
**Anticipation Guide**

*Divide by One-Digit Numbers*

**STEP 1**

**Before you begin Chapter 15**

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

<table>
<thead>
<tr>
<th>STEP 1 A, D, or NS</th>
<th>Statement</th>
<th>STEP 2 A or D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The dividend is the number that is being divided.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>The divisor is the number by which the dividend is being divided.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>In $18 \div 3 = 6$, 18 is the divisor.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>In $6 \div 3 = 2$, 3 is the divisor.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>In $10 \div 2 = 5$, 5 is the quotient.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>A quotient is the answer to a division problem.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The unit price is the price of a single item.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>An estimate is a number close to an exact value.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>If three bananas are $1.50, one is $0.50.</td>
<td></td>
</tr>
</tbody>
</table>

**STEP 2**

**After you complete Chapter 15**

- 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.
You will need:
15 index cards
scissors

Fold the index cards in half and cut them on the fold line. Copy the division expressions and quotients above, one on each card.

1. Shuffle the cards and place them face down in 5 rows with 6 cards in each row.
2. Have player 1 turn over 2 cards. If the division expression and the quotient match, the player keeps the cards. If the cards do not match, he or she leaves them in their rows, turning them face down.
3. Take turns turning over cards and making pairs whenever possible. When all pairs have been made, the player with the most pairs wins.
Reteach

Divide Multiples of 10, 100, and 1,000

You can use models to divide multiples of 10.

Find 120 ÷ 3.
First model 120. Then divide the models into 3 groups.

So, 120 ÷ 3 = 40.

Use basic facts and division patterns to divide.

Find 100 ÷ 2.
If 10 ÷ 2 = 5,
then 10 tens ÷ 2 = 5 tens.
So, 100 ÷ 2 = 50.

Divide.

1. 320 ÷ 8 = _____
2. 300 ÷ 6 = _____

3. 8 ÷ 4 = _____
4. 15 ÷ 3 = _____

800 ÷ 4 = _____
150 ÷ 3 = _____

Divide. You may use base-ten blocks.

5. 2)160
6. 4)280
7. 8)240
8. 6)180

9. 7)3,500
10. 9)2,700
11. 3)90
12. 5)4,000
Skills Practice

Divide Multiples of 10, 100, and 1,000

Write a division sentence. Then solve.

1. ____________________________

2. ____________________________

3. An engineer estimates that a job will take 640 hours. If the engineer works 8 hours each day, how many days will it take to finish the job?

______________________________

4. The engineer gives part of the job to 4 workers. If they each work the same number of hours and they work a total of 200 hours, how many hours do they each work?

______________________________

Divide.

5. $3 \div 1,800$  
6. $4 \div 240$  
7. $9 \div 270$  
8. $2 \div 140$

9. $3 \div 120$  
10. $8 \div 6,400$  
11. $7 \div 350$  
12. $4 \div 3,600$

13. $7 \div 560$  
14. $3 \div 240$  
15. $7 \div 140$  
16. $6 \div 240$

17. $1,800 \div 2 = _____$  
18. $60 \div 2 = _____$  
19. $270 \div 3 = _____$

20. $250 \div 5 = _____$  
21. $6,300 \div 7 = _____$  
22. $300 \div 5 = _____$

23. $320 \div 4 = _____$  
24. $160 \div 2 = _____$  
25. $2,800 \div 4 = _____$
Use basic facts and patterns of zeros to find each quotient.

1. \(8 \div 2 = \underline{____} \)  
   \(80 \div 2 = \underline{____} \)  
   \(800 \div 2 = \underline{____} \)  
   \(8,000 \div 2 = \underline{____} \)

2. \(63 \div 7 = \underline{____} \)  
   \(630 \div 7 = \underline{____} \)  
   \(6,300 \div 7 = \underline{____} \)  
   \(63,000 \div 7 = \underline{____} \)

3. \(27 \div 9 = \underline{____} \)  
   \(270 \div 9 = \underline{____} \)  
   \(2,700 \div 9 = \underline{____} \)  
   \(27,000 \div 9 = \underline{____} \)

4. \(10 \div 5 = \underline{____} \)  
   \(100 \div 5 = \underline{____} \)  
   \(1,000 \div 5 = \underline{____} \)  
   \(10,000 \div 5 = \underline{____} \)

Divide.

5. \(3,600 \div 4 = \underline{____} \)

6. \(700 \div 7 = \underline{____} \)

7. \(56,000 \div 8 = \underline{____} \)

8. The Espinoza triplets want to put together a puzzle that has 1,500 pieces. If each one puts together the same number of pieces, how many pieces does each triplet have to put together?

9. A farmer has 24,000 acres of land. He wants to divide it evenly among 8 different crops. How much land does each crop get?

   ___________________________________________________________________

Spiral Review

Multiply. (Lesson 14–8)

10. \(7 \times $3.67 = \underline{____} \)

11. \(9 \times $9.50 = \underline{____} \)

12. \$2.19 \times 4 = \underline{____} \)

13. \$8.25 \times 4 = \underline{____} \)
Name ______________________ Date ____________________

15–1

Problem–Solving Practice

Divide Multiples of 10, 100, and 1,000

Solve.

1. After working for 3 weeks, Pat earned $600.

How much did he earn each week?
_____ each week

2. The office supply store has 20 boxes of folders left that are on sale. There are 800 folders in all.

How many folders are in each box?
_____ folders

3. The computer printer has 240 sheets of paper in it. Each student prints out an 8-page book report. Now the printer is empty. How many students printed out their reports?
_____ students

4. Mr. Wilson will give out 120 textbooks to the class. Each student will get 6 textbooks. How many students are in the class?
_____ students

5. Theo spent a total of $560 in 8 weeks. He spent the same amount each week. He spent $30 per week on food, and he paid bills with the rest of the money. How much did he spend each week on bills?
_____ each week

6. It took 2,400 seconds for Megan to finish her science and math homework. Each assignment took the same amount of time to complete. Was this more or less than 1 hour for each assignment? Explain.

______________________________
Looking at Division Patterns

Tell if the pattern is a multiple of 10, 100, or 1,000. Then write the missing numbers on the lines.

1. ______, ______, ______, 4,400, 4,300, 4,200, 4,100
   Multiples of ______

2. 280, _______, 260, _______, _______, 230
   Multiples of ______

3. 63,000, 64,000, _______, _______, _______
   Multiples of ______

Divide the numbers in the middle ring by the number in the center. Write the quotient on the outside ring.

What do you notice about dividing by a divisor of 1 followed by zeros?

How are the problems 70 ÷ 10, 700 ÷ 100, and 7,000 ÷ 1,000 and their quotients alike? How are they different?
Estimate Quotients

You can use rounding and basic facts to help you estimate quotients.

Estimate $375 \div 6$.
Round 375 to the nearest ten that has a basic fact you can use.

$375$ is between 360 and 420.

Try $360 \div 6 = 60$.
Try $420 \div 6 = 70$.

So, $375 \div 6$ is about 60.

Estimate by rounding. Circle the basic fact you used.

1. $184 \div 4$ ______ 
   $180 \div 3$ 
   $200 \div 4$ 
   $240 \div 4$

2. $110 \div 5$ ______ 
   $100 \div 5$ 
   $120 \div 6$ 
   $100 \div 2$

3. $280 \div 3$ ______ 
   $270 \div 3$ 
   $210 \div 3$ 
   $280 \div 4$

4. $405 \div 8$ ______ 
   $400 \div 5$ 
   $400 \div 8$ 
   $320 \div 8$

5. $300 \div 7$ ______ 
   $210 \div 7$ 
   $300 \div 6$ 
   $280 \div 7$

6. $57 \div 2$ ______ 
   $56 \div 7$ 
   $600 \div 2$ 
   $60 \div 2$

Estimate by rounding. Write the equation you used to solve.

7. $370 \div 6 = _____$ 
   $8. 200 \div 9 = _____$ 
   $9. 124 \div 4 = _____$

10. $490 \div 9 = _____$ 
   $11. 253 \div 3 = _____$ 
   $12. 750 \div 8 = _____$
Estimate by rounding.

1. \(6 \div 63\)  
2. \(7 \div 562\)  
3. \(9 \div 359\)  
4. \(8 \div 390\)  
5. \(3 \div 274\)  
6. \(3 \div 118\)  
7. \(7 \div 214\)  
8. \(5 \div 392\)  
9. \(2 \div 156\)  
10. \(2 \div 142\)  
11. \(6 \div 421\)  
12. \(6 \div 361\)  
13. \(301 \div 5\)  
14. \(242 \div 3\)  
15. \(492 \div 7\)  
16. \(563 \div 8\)  
17. \(204 \div 5\)  
18. \(122 \div 2\)  
19. \(100 \div 2\) \(\bigcirc\) 40  
20. \(90 \div 3\) \(\bigcirc\) 40  
21. \(150 \div 3\) \(\bigcirc\) 60  
22. \(270 \div 9\) \(\bigcirc\) 30  
23. \(250 \div 5\) \(\bigcirc\) 60  
24. \(400 \div 8\) \(\bigcirc\) 70  

ALGEBRA Compare. Write > or <.

25. There are 390 students going on a trip to a factory. They fill 5 buses. Each bus holds the same number of students. About how many students does each bus hold?

26. At the factory tour, the guide tells the students that each worker makes an average of 250 parts each day. About how many parts each hour does a worker make during an 8-hour day?
Estimate by rounding.

1. $562 \div 8$  
2. $3,638 \div 6$  
3. $454 \div 5$  
4. $2,437 \div 3$  
5. $7,240 \div 9$  
6. $823 \div 4$  
7. $632 \div 7$  
8. $8,456 \div 2$

9. The Anderson family is taking a cross-country road trip. They covered 2,420 miles in 8 days. If they wanted their next trip to be 2 days faster, about how many miles a day would they have to drive?

Use basic facts and patterns of zeros to find each quotient. (Lesson 15–1)

10. $18 \div 3 = \underline{6}$  
11. $16 \div 2 = \underline{8}$  
12. $36 \div 4 = \underline{9}$  
   $180 \div 3 = \underline{60}$  
   $160 \div 2 = \underline{80}$  
   $360 \div 4 = \underline{90}$  
   $1,800 \div 3 = \underline{600}$  
   $1,600 \div 2 = \underline{800}$  
   $3,600 \div 4 = \underline{900}$

Divide. Use patterns.

13. $8,000 \div 4 = \underline{2,000}$  
14. $250 \div 5 = \underline{50}$  
15. $45,000 \div 9 = \underline{5,000}$

16. Five juice machines can hold 500 cans. How many cans of juice can each machine hold?
Estimate to solve.

1. Amy feeds the 4 class hamsters the same amount of food each day. She has 22 ounces of food. About how many ounces of food does each hamster get per day?
   about ______ ounces

2. In art class, Cory is making paper chains. It takes him 6 minutes to make each chain. There are about 28 minutes left in class. About how many more chains can he make?
   about ______ more chains

3. Lorrie is emptying her sister’s wading pool with a pump. The pool holds 142 gallons. Each minute the pump removes 7 gallons of water. About how many minutes will it take to empty the pool?
   about ______ minutes

4. The third graders have raised $282 for their class trip to the Wildride Amusement Park. Admission to the park is $9. There are 30 students in the third grade. Do they have enough money for admission for all of them? Explain your answer.

   ________________

   ________________

   ________________

5. Nina and her three friends are running a relay race. The total distance is 3,210 meters. Each person runs the same distance. About how many meters does each friend run?
   about ______ meters

6. The total distance around the Kennington Village Square is 3,928 feet. About how long is one side of the village square?
   about ______ feet
Estimate the quotients. Then write the letter that matches each quotient on the line below to solve the mystery question.

Estimate the quotients for these problems by rounding the dividend to the nearest 10.

R T E O N
39 ÷ 4 127 ÷ 5 19 ÷ 10 77 ÷ 2 541 ÷ 9

Estimate the quotients for these problems by rounding the dividend to the nearest 100.

O S U T I
3,641 ÷ 9 480 ÷ 5 6,332 ÷ 7 321 ÷ 6 5,623 ÷ 8

Estimate the quotients for these problems by rounding the dividend to the nearest 1,000.

A D T E M
7,654 ÷ 8 80,913 ÷ 9 45,327 ÷ 9 3,444 ÷ 5 2,194 ÷ 4

What should you do if you do not need an exact answer to a division problem?

<table>
<thead>
<tr>
<th>10</th>
<th>400</th>
<th>900</th>
<th>60</th>
<th>9,000</th>
<th>26</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>100</td>
<td>50</td>
<td>700</td>
<td>500</td>
<td>1,000</td>
</tr>
</tbody>
</table>
Find $64 \div 4$.

**Step 1**

Decide if there are enough tens for 4 groups.

- $4 < 6$
- $4 \overline{)64}$ ← There are enough tens, so the first digit goes in the tens place.

**Step 2**

Divide the tens into 4 groups.

- $1 \overline{)64}$ ← 1 ten in each group
- $4 \overline{)64}$ ← 4 tens used
- $24 \leftarrow 2$ tens left

Bring down the ones.

**Step 3**

Regroup 2 tens 4 ones as 24 ones. Divide the ones into 4 groups.

So, $64 \div 4 = 16$.

1. $3)8 \overline{)4}$
2. $5)9 \overline{)5}$
3. $4)8 \overline{)8}$

Divide. Use models if needed. Check your answer.

1. $\underline{3)8} \overline{)4}$
   - $\underline{6} \overline{)4}$
   - $\underline{4}$

2. $\underline{5)9} \overline{)5}$
   - $\underline{5}$

3. $\underline{4)8} \overline{)8}$
   - $\underline{8}$
**Skills Practice**

*Two-Digit Quotients*

Divide. Use models if needed. Check your answer.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>5)65</td>
<td>2.</td>
<td>5)85</td>
</tr>
<tr>
<td>3.</td>
<td>4)64</td>
<td>4.</td>
<td>3)99</td>
</tr>
<tr>
<td>5.</td>
<td>5)60</td>
<td>6.</td>
<td>7)84</td>
</tr>
<tr>
<td>7.</td>
<td>2)86</td>
<td>8.</td>
<td>7)91</td>
</tr>
<tr>
<td>9.</td>
<td>6)96</td>
<td>10.</td>
<td>4)76</td>
</tr>
<tr>
<td>11.</td>
<td>4)96</td>
<td>12.</td>
<td>8)96</td>
</tr>
<tr>
<td>13.</td>
<td>3)93</td>
<td>14.</td>
<td>6)84</td>
</tr>
<tr>
<td>15.</td>
<td>3)84</td>
<td>16.</td>
<td>2)62</td>
</tr>
<tr>
<td>17.</td>
<td>6)78</td>
<td>18.</td>
<td>2)92</td>
</tr>
<tr>
<td>19.</td>
<td>5)80</td>
<td>20.</td>
<td>2)30</td>
</tr>
</tbody>
</table>

21. 98 ÷ 7 =   

22. 48 ÷ 3 =   

23. 50 ÷ 2 =   

24. 90 ÷ 5 =   

25. 104 ÷ 8 =   

26. 91 ÷ 7 =   

27. 72 ÷ 4 =   

28. 88 ÷ 8 =   

29. $72 ÷ 4 =   

30. 60 ÷ 2 =   

31. 63 ÷ 3 =   

32. 72 ÷ 6 =   

**Solve.**

33. Dave earns $70 for cleaning a house. He splits the money equally with a helper. How much money do they each get?   

34. Ruby earns $96 in tips at her job as a waitress. She divides her money into 3 equal amounts for taxes, spending, and saving. How much money does she have for spending?
Divide. Use models if needed. Check your answer.

1. \(96 \div 2\)  
2. \(72 \div 8\)  
3. \(85 \div 5\)

Complete each table.

4. **Rule:** Divide by 5

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
</tr>
<tr>
<td>70</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>15</td>
</tr>
</tbody>
</table>

5. **Rule:** Divide by 3

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22</td>
</tr>
<tr>
<td>72</td>
<td>24</td>
</tr>
<tr>
<td>78</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>16</td>
</tr>
</tbody>
</table>

6. **Rule:** Divide by 6

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

Divide. Use models if needed. Check your answer.

7. Yuki swam 93 feet across the pool in 10 seconds. How many yards is that?  
8. Frank has 76 quarters in his pocket. How many dollars is that?

Spiral Review

Estimate by rounding. (Lesson 15–2)

9. \(198 \div 4\)  
10. \(564 \div 7\)  
11. \(8,056 \div 2\)

12. To raise money for new uniforms, the student marching band must sell 688 concert tickets in a week. About how many tickets do they have to sell per day?
Problem-Solving Practice
Two-Digit Quotients

Estimate first. Then divide.

1. At the Royce School there are 48 cars in the teachers’ parking lot. The same number of cars are parked in each of 3 rows. How many cars are parked in each row?
   _____ cars

2. The art teacher has a collection of 56 paintbrushes. He puts the same number of brushes into 4 different sections of his art box. How many brushes are in each section?
   _____ brushes

3. Clare works at a laundromat. She will wash 72 pairs of pants. The washing machine can wash 6 pairs of pants for each load of laundry. How many loads of laundry will she need to do to wash all of the pants?
   _____ loads

4. For a class project, Marty has 72 pieces of pasta. He is pasting the pasta into 6 equal rows on poster board. How many pieces will be in each row?
   _____ pieces

5. Gina has 42 pennies in her bank and 23 pennies in her wallet. She wants to exchange the pennies for nickels. How many nickels will she get?
   _____ nickels

6. There are 19 boys and 17 girls in the third grade. Each day, 3 students will give an oral report. How many days will students be giving oral reports?
   _____ days
Enrich

Bats about These Facts

Solve each problem. Then use the quotient in that problem to fill in the blank in the bat fact below the problem.

1. \(150 \div 3 = \)  
   Bats have been around for ______ million years.

2. \(102 \div 6 = \)  
   There are at least ______ families of different bats in North America.

3. \(128 \div 4 = \)  
   The oldest known bat lived to be about ______ years old.

4. \(140 \div 7 = \)  
   There are nearly ______ million free-tailed bats living in colonies in Bracken, Texas. They eat about 250 tons of insects each night!

5. \(135 \div 9 = \)  
   The smallest species of bat, the Bumblebee bat, has a wingspan of ______ cm. It weighs about the same as a penny. The largest bats, the flying foxes in Africa, have wingspans of 6 feet.

6. \(36 \div 3 = \)  
   Some bats eat about ______ mosquitoes each minute. That’s about 700 an hour.

7. \(198 \div 6 = \)  
   Bats help farmers by eating ______ million beetles that could ruin crops during the summer.
Reteach

Problem-Solving Strategy

Work Backward

Aretha rode on a bus for 2 miles from home to the train station. Then she took a train to the city. She returned home the same way. She traveled 16 miles total. How many miles did she travel on the train each way?

<table>
<thead>
<tr>
<th>Step 1 Understand</th>
<th>What do you need to find?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>You need to find how many miles she traveled each way on the train.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2 Plan</th>
<th>Make a plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Work backward.</td>
</tr>
<tr>
<td></td>
<td>She traveled 16 miles total. Each bus ride was two miles.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3 Solve</th>
<th>Carry out your plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Step 1</strong> Find the number of miles each way.</td>
</tr>
<tr>
<td></td>
<td>[ 16 \div 2 = 8 ]</td>
</tr>
<tr>
<td></td>
<td><strong>Step 2</strong> She traveled 2 miles on the bus each way.</td>
</tr>
<tr>
<td></td>
<td>[ 8 - 2 = 6 ]</td>
</tr>
<tr>
<td></td>
<td>She traveled 6 miles each way on the train.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4 Check</th>
<th>Check your answer.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make sure your answer is reasonable.</td>
</tr>
</tbody>
</table>

Solve. Use the work backward strategy.

1. The South Sound Ferry has a snack bar. Drinks cost $1 and hamburgers cost $3. Julia has 1 drink and 1 hamburger. Julia and Harry spend $12 altogether. If Harry buys the same number of each item, how many drinks and hamburgers does he have?

2. Tickets for the ferry are $5 for adults and $2 for children. The Lin family spends $16 to ride the ferry. How many children do Mr. and Mrs. Lin have?
3. Marisol and her sister Marta spend $3.20 on two bus tickets to the carnival. Once at the carnival, Marisol buys a popcorn for $4.25 and Marta buys a hot dog for $2.75. They each get a caramel apple, which cost $1.50 each. If they began with $20.00 to share and need to save at least $3.20 to get back home, do they have any money to spend after eating? How much?

4. Bethany and Andrey want to go to the library. Andrey lives 10 blocks away from the library. Bethany will be walking from the park, which is 7 blocks away from Andrey’s house. If Bethany stops first to pick up Andrey, how many total blocks will she walk to the library? How many more blocks will she walk than Andrey?

5. Samantha’s mother has given her 2 hours to play any of her 4 favorite video games. It will take her 30 minutes to play one game and 45 minutes to play another. The third game takes 20 minutes to play and the fourth games takes one hour and 20 minutes. List three different combinations of games Samantha can play completely in the amount of time her mother has given her.
Skills Practice
Problem-Solving Strategy

Solve. Use the work backward strategy.

1. There are 4 rows of seats in the first-class part of a plane. There is a business-class part of the same plane. If there are 4 seats in each row and 40 seats on the entire plane, how many rows of seats are there in the business-class section?

2. Mr. and Mrs. Lopez take several members of the school’s theater club to a show. Adult tickets cost $9 and student tickets cost $5. They spend $38 on tickets. How many students did Mr. and Mrs. Lopez take?

3. Mr. and Mrs. Jefferson take their 3 children to a Revolutionary War fort. Tickets cost $7 for adults and $5 for children. How much do the Jeffertons spend?


5. Mr. Hong takes a bus to the city. He arrives at a business meeting at 9:00 A.M. The bus ride takes 30 minutes. Then he takes a subway to get to a meeting. The subway ride takes 15 minutes. What time did he leave his house?

6. Eight passengers each took 2 suitcases on a plane. 32 passengers each took one suitcase. How many suitcases did the passengers take on the plane in all?
Solve. Use the work backward strategy.

1. Olivia is packing for vacation. Her large suitcase will fit 36 items of clothing and her small suitcase will fit 18 items of clothing. If she wants to bring 60 items of clothing, how many will she have to leave behind?

2. Gavin is saving up to buy a new bicycle. The one he wants costs $125. His mother is giving him $50, but he will have to earn the rest by mowing lawns for $5 each. How many lawns will he have to mow before he can buy the bicycle?

3. It’s 2 P.M. and Marvin needs to finish reading a 150-page book before returning it to the library at 5 P.M. He has already read 90 pages of the book. How many pages an hour does he have to read to return the book on time?

4. Francesca is a flower girl in a wedding. She has to drop rose petals on the ground with every step she takes down the aisle. If it will take her 9 steps to make it down the aisle and her basket holds 360 rose petals, about how many petals can she drop each time?

Spiral Review

Divide. Use models if needed. (Lesson 15–3)

5. 87 ÷ 3 = _____

6. 72 ÷ 6 = _____

7. 86 ÷ 2 = _____

Complete each table.

8. Rule: Divide by 4

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td></td>
</tr>
<tr>
<td>92</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td></td>
</tr>
</tbody>
</table>

9. Rule: Divide by 5

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>17</td>
</tr>
<tr>
<td>95</td>
<td></td>
</tr>
</tbody>
</table>

10. Rule: Divide by 7

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>8</td>
</tr>
<tr>
<td>70</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>14</td>
</tr>
</tbody>
</table>
Problem-Solving Skill: Multi-Step Problems

Keep dividing to find the answer. Then rearrange the letters after each problem and write them below to spell the answer to the riddle.

Riddle: If you start spelling the words for the numbers, beginning with one, how far would you have to go before you used the letter “a”?

1. \(135 \div 3 = \underline{\quad} \div 5 = \underline{\quad} \div 1 = \underline{\quad}\)  h

2. \(360 \div 4 = \underline{\quad} \div 3 = \underline{\quad} \div 5 = \underline{\quad}\)  d

3. \(880 \div 2 = \underline{\quad} \div 4 = \underline{\quad} \div 10 = \underline{\quad}\)  n

4. \(567 \div 9 = \underline{\quad} \div 7 = \underline{\quad} \div 3 = \underline{\quad}\)  t

5. \(936 \div 4 = \underline{\quad} \div 6 = \underline{\quad} \div 3 = \underline{\quad}\)  o

6. \(1,000 \div 10 = \underline{\quad} \div 4 = \underline{\quad} \div 5 = \underline{\quad}\)  s

7. \(672 \div 6 = \underline{\quad} \div 7 = \underline{\quad} \div 8 = \underline{\quad}\)  u

8. \(345 \div 5 = \underline{\quad} \div 3 = \underline{\quad} \div 1 = \underline{\quad}\)  a

Answer: \(\underline{\quad} \underline{\quad} \underline{\quad} \underline{\quad} \underline{\quad} \underline{\quad} \underline{\quad} \underline{\quad} \underline{\quad}\)

3 9 13 2 5 23 11 6
Find \(387 \div 3\).

**Step 1**
Decide if there are enough hundreds for 3 groups.

\[
\begin{array}{c}
3 = 3 \\
\text{There are enough hundreds.}
\end{array}
\]

\[
\begin{array}{c}
3)387 \leftarrow \text{There are enough hundreds, so the first digit goes in the hundreds place.}
\end{array}
\]

**Step 2**
Divide the hundreds into 3 groups.

\[
\begin{array}{c}
1 \leftarrow 1 \text{ hundred}
\end{array}
\]

\[
\begin{array}{c}
3)387 \quad \text{in each group}
\end{array}
\]

\[
\begin{array}{c}
-3 \downarrow \leftarrow 3 \text{ hundreds used}
\end{array}
\]

\[
\begin{array}{c}
08 \leftarrow \text{no hundreds left}
\end{array}
\]

Bring down the tens.

**Step 3**
Divide the tens into 3 groups.

\[
\begin{array}{c}
12 \leftarrow 2 \text{ tens in each group}
\end{array}
\]

\[
\begin{array}{c}
3)387
\end{array}
\]

\[
\begin{array}{c}
-3 \downarrow
\end{array}
\]

\[
\begin{array}{c}
08
\end{array}
\]

\[
\begin{array}{c}
-6 \leftarrow 6 \text{ tens used}
\end{array}
\]

\[
\begin{array}{c}
2 \leftarrow 2 \text{ tens left}
\end{array}
\]

**Step 4**
Regroup 2 tens 7 ones as 27 ones. Divide the ones into 3 groups.

\[
\begin{array}{c}
129 \leftarrow 9 \text{ ones in each group}
\end{array}
\]

\[
\begin{array}{c}
3)387
\end{array}
\]

\[
\begin{array}{c}
-3 \downarrow
\end{array}
\]

\[
\begin{array}{c}
08
\end{array}
\]

\[
\begin{array}{c}
-6 \downarrow
\end{array}
\]

\[
\begin{array}{c}
27
\end{array}
\]

\[
\begin{array}{c}
-27 \leftarrow 27 \text{ ones used}
\end{array}
\]

\[
\begin{array}{c}
0 \leftarrow \text{no ones left}
\end{array}
\]

So, \(387 \div 3 = 129\).

**Divide. Check your answers.**

1. \(864 \div 4 = \underline{216}\)
2. \(987 \div 3 = \underline{329}\)
3. \(573 \div 3 = \underline{191}\)
4. \(833 \div 7 = \underline{119}\)
5. \(725 \div 5 = \underline{145}\)
6. \(288 \div 2 = \underline{144}\)
Skills Practice

Three-Digit Quotients

Divide. Check your answers.

1. 4)456
2. 7)385
3. 6)294
4. 6)528
5. 3)681
6. 5)290
7. 2)578
8. 3)261
9. 5)745
10. 4)868
11. 9)252
12. 7)406
13. 4)368
14. 9)288
15. 3)573
16. 6)186
17. 7)504
18. 8)576
19. 2)924
20. 6)834

21. 875 ÷ 7 = _____
22. 528 ÷ 3 = _____
23. 385 ÷ 5 = _____

24. 974 ÷ 2 = _____
25. 852 ÷ 3 = _____
26. 432 ÷ 8 = _____

27. 632 ÷ 8 = _____
28. 204 ÷ 3 = _____
29. 420 ÷ 5 = _____

30. 896 ÷ 2 = _____
31. 476 ÷ 4 = _____
32. 234 ÷ 2 = _____

Solve.

33. Betsy and her brother split the cost of lemons for their lemonade stand. They spent a total of 298¢. How much did each pay?

34. The lemonade container holds 128 ounces. How many 8-ounce glasses of lemonade does the container hold?
Homework Practice

Three-Digit Quotients

Divide. Check your answers.

1. \(984 \div 2 = \) 
2. \(625 \div 5 = \)
3. \(791 \div 7 = \)
4. \(558 \div 9 = \)
5. \(873 \div 3 = \)
6. \(336 \div 4 = \)

Use the table for Exercises 7–10.

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Bottles in a Box</th>
<th>Total Number of Tablets in a Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td>6</td>
<td>810 tablets</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>8</td>
<td>912 chewable tablets</td>
</tr>
<tr>
<td>calcium supplements</td>
<td>5</td>
<td>625 chewable tablets</td>
</tr>
<tr>
<td>multi-vitamins</td>
<td>9</td>
<td>945 tablets</td>
</tr>
</tbody>
</table>

7. How many Vitamin C tablets are in a bottle? ________________
8. How many Vitamin A tablets are in a bottle? ________________
9. How many multi-vitamins are in a bottle? ________________
10. How many calcium supplements are in a bottle? ________________

Solve. Use the work backward strategy. (Lesson 15–4)

11. David’s dog needs a bath. If David uses a 5-gallon bucket to halfway fill a 60-gallon tub, how many buckets of water does he need to wash the dog?

12. Winnie is helping her uncle build a deck. They have 20 pieces of 12-foot lumber. If they need 2 screws for every 3 feet of lumber, how many screws do they need?
Solve.

1. Megan divides 147 carrots equally into plastic snack bags. If she puts 7 carrots in each bag, how many plastic snack bags does she need?
   
   _____ snack bags

2. Mrs. Ruiz has 126 baseball cards. She gives an equal amount to each of her 3 children. How many does each child get?
   
   _____ baseball cards

3. Elizabeth is making large candles. She has 228 pounds of wax. Each candle will use 6 pounds of wax. How many candles can Elizabeth make?
   
   _____ candles

4. Myla is the coach of the Pearson Sack Race Club. The club has 156 sacks and 7 members. After practice, each member takes the same number of sacks home. Myla takes home any sacks that are left over. If each member takes home as many sacks as possible, how many does Myla take home?
   
   _____ sacks

5. Larry plays on the school basketball team. He scored a total of 134 points in 5 games, and he scored the same number of points in each of the first 4 games. In the last game he scored 30 points. How many more points did he score in the last game than in any of the other 4 games?
   
   _____ more points

6. Rick plans to make 6 large birdhouses and 2 small ones. He will use a total of 148 nails. Each small birdhouse uses 8 nails. If each large birdhouse uses the same number of nails, how many nails will be used for each large birdhouse?
   
   _____
Enrich

Three-Digit Tree Trivia

Divide. Then match the quotients with the trees shown below. Then, order the trees from shortest to tallest. These are the tallest types of trees in North America.

- Sugar Pine
- Noble Fir
- Sequoia
- Douglas Fir
- Redwood

\[
\begin{align*}
1,089 \div 3 &= 363 \\
1,650 \div 6 &= 275 \\
2,430 \div 9 &= 270 \\
1,088 \div 4 &= 272 \\
1,645 \div 5 &= 329
\end{align*}
\]

About how many 6-foot-tall adults would need to stand on each other’s shoulders to be as tall as the tallest tree? Show how you got your answer.
Choose the Best Strategy

Justina is planting a row of shrubs in her backyard. She places shrubs 3 feet apart over a distance of 20 yards. She places the first shrub 3 feet from the edge of the yard. How many shrubs does Justina plant?

<table>
<thead>
<tr>
<th>Step 1 Understand</th>
<th>Be sure you understand the problem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read carefully.</td>
<td></td>
</tr>
<tr>
<td>What facts do you know?</td>
<td></td>
</tr>
<tr>
<td>• The shrubs are spread over a distance of _____ yards.</td>
<td></td>
</tr>
<tr>
<td>• Justina begins 3 feet from the edge of the yard and places shrubs _____ feet apart.</td>
<td></td>
</tr>
<tr>
<td>What do you need to find?</td>
<td></td>
</tr>
<tr>
<td>• You need to find the number of feet in _____ yards.</td>
<td></td>
</tr>
<tr>
<td>• You need to find how many _____________.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2 Plan</th>
<th>Make a plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical Reasoning</td>
<td>Choose a strategy.</td>
</tr>
<tr>
<td>• Draw a Picture or Diagram</td>
<td>To find the answer, you can draw a diagram.</td>
</tr>
<tr>
<td>• Act It Out</td>
<td>Find the number of feet in 20 yards.</td>
</tr>
<tr>
<td>• Make a Table or List</td>
<td>Show a distance that is that many feet long.</td>
</tr>
<tr>
<td>• Work Backward</td>
<td>Count by 3s to see how many shrubs Justina uses if they are placed 3 feet apart.</td>
</tr>
</tbody>
</table>

To find the answer, you can also write an equation. All the shrubs are the same distance apart. Use division to find how many shrubs Justina uses.
Step 3  Solve

Carry out your plan.

How many feet are in 20 yards?
1 yard = 3 feet
20 × 3 = 60

Draw a diagram. Show a 60-foot distance. Count by 3s, adding tick marks as shown.

Count the tick marks from 3 to 60. Justina uses _____ shrubs.

Step 4  Check

Is the solution reasonable?
Reread the problem.

Does your answer make sense?  Yes  No
Which method do you prefer? Explain.

Use any strategy shown below to solve.

- Make an organized list
- Act it out
- Draw a picture
- Use logical reasoning
- Work backward

1. There are 900 seconds in 15 minutes. How many seconds are in one hour?

2. Adelaide’s parents are having a dinner party. There are 112 guests invited. Should 5, 6, or 8 guests sit at each table so that each table has the same number of guests?
Use any strategy shown below to solve.

- Make an organized list
- Act it out
- Draw a picture
- Use logical reasoning
- Work backward

1. On Peapack’s Park Day, volunteers work in the park. One volunteer has 6 boxes of plants. There are 12 plants in each box. If the volunteer puts the plants in rows of 9, how many rows can he make?

2. Peapack’s town square is surrounded by 64 trees. The same number of trees are on each of the 4 sides. The trees on each side are divided into 2 equal rows. How many trees are in each row?

3. Bonnie takes a large photo. She makes a square frame for the photo. Each side of the frame is 27 inches long. How many inches around is the frame?

4. Some volunteers are building picnic tables. The tables can seat 4 adults or 6 children. How many adults can sit at 6 tables? How many children?

5. The benches at the park can seat a total of 95 people. Each bench can seat 5 people. How many benches are at the park?

6. The third-grade class makes a mural for the train station. The mural is 30 feet long. The mural is divided into 6 equal sections. How many feet long is each section?

7. Write a problem that you could solve by drawing a diagram or by writing a division sentence. Share it with others.
Use any strategy shown below to solve. Tell what strategy you used.

- Make an organized list
- Act it out
- Draw a picture
- Use logical reasoning
- Work backward

1. School starts at 8:45 A.M. Nick needs 30 minutes to get dressed and eat breakfast. It then takes him 35 minutes to get to school. What time does he have to wake up to be on time for school?

2. Melanie planted chives in her herb garden. After 2 weeks, they grew to 4 inches. The next day, they measured 5 and a half inches. The day after that, they measured 7 inches. If they continue growing at this rate, how tall were the chives the day after that?

3. Pepe needs to put lightbulbs on the second floor of his house. Two of the bedrooms have ceiling lamps that need 3 bulbs each. The other bedroom has 2 lamps that each need 1 bulb. The 4 bulbs above the bathroom mirror also need to be replaced. How many bulbs does Pepe need in all?

Spiral Review

Divide. Check your answers. (Lesson 15–5)

4. $795 \div 3 = \underline{}$
5. $666 \div 9 = \underline{}$
6. $672 \div 7 = \underline{}$
7. $408 \div 8 = \underline{}$
8. $222 \div 6 = \underline{}$
9. $425 \div 5 = \underline{}$
10. $272 \div 4 = \underline{}$
11. $477 \div 9 = \underline{}$
Read and solve each problem to discover the prices of food items in the Mystery Café. When you discover the prices, write them on the lines next on the line items.

<table>
<thead>
<tr>
<th>Food</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taco</td>
<td>$_____</td>
</tr>
<tr>
<td>Cheeseburger</td>
<td>$_____</td>
</tr>
<tr>
<td>Potato wedges</td>
<td>$_____</td>
</tr>
<tr>
<td>Chicken strips</td>
<td>$_____</td>
</tr>
<tr>
<td>Salad</td>
<td>$_____</td>
</tr>
</tbody>
</table>

1. Justin bought 6 tacos. He spent $5.34. What is the price for each taco?

2. Blake and Glen bought 2 orders of potato wedges and 4 tacos. They spent $5.66. What is the price for each order of potato wedges?

3. Madeline is treating her friends to lunch for her birthday. She bought 8 cheeseburgers. She gave the cashier a $10.00 and got $1.28 in change. What is the price for each cheeseburger?

4. Victor ordered chicken strips and a salad. It cost him $4.95. The cost of the salad was $\frac{1}{3}$ of the total cost. What is the price of a salad?

What is the price of an order of chicken strips?
Reteach

Divide Money

To divide money amounts, divide the same way you divide whole numbers.

Find $9.56 \div 4.$

**Step 1** Divide the dollars.

\[
\begin{array}{c|c}
2 & 23 \\
4 \overline{)9.56} & 4 \overline{)9.56} \\
-8 & -8 \\
1 & 15 \\
\hline
1 & 12 \\
36 & 3 \\
\hline
0 & 0
\end{array}
\]

**Step 2** Divide the dimes.

\[
\begin{array}{c|c}
2 & 23 \\
4 \overline{)15} & 4 \overline{)15} \\
-8 & -8 \\
15 & 15 \\
\hline
12 & 0 \\
36 & 3 \\
\hline
0 & 0
\end{array}
\]

**Step 3** Divide the pennies.

\[
\begin{array}{c|c}
2 & 23 \\
4 \overline{)36} & 4 \overline{)36} \\
-8 & -8 \\
15 & 15 \\
\hline
12 & 0 \\
36 & 3 \\
\hline
0 & 0
\end{array}
\]

**Step 4** Write the dollar sign and decimal point in the quotient.

\[
\begin{array}{c|c}
\text{The answer is correct.} & \text{The answer is correct.} \\
\text{Separate the dollars and cents with a decimal point.} & \text{Separate the dollars and cents with a decimal point.}
\end{array}
\]

**Check**

\[
\begin{array}{c}
$2.39 \times 4 = 9.56 \\
\text{The answer is correct.}
\end{array}
\]

Divide. Check your answer.

1. \(4 \overline{)6.20} \)  
2. \(7 \overline{)8.61} \)  
3. \(3 \overline{)6.93} \)  
4. \(5 \overline{)4.75} \)  
5. \(4 \overline{)3.92} \)  
6. \(9 \overline{)17.28} \)
Divide. Check your answer.

1. $4.50 \div 5 = \square$

2. $8.32 \div 4 = \square$

3. $3.50 \div 5 = \square$

4. $9.27 \div 3 = \square$

Find the unit cost.

5. 4 shirts for $20

6. 10 notebooks for $5

7. 3 cans of soup for $4.50

8. 4 bottles of water for $2

For Exercises 9–10 refer to the chart.

9. Amy bought 3 of one item and spent $21. What did she buy?

10. Jonathan bought 4 of one item and spent $12. What did he buy?
Divide. Check your answer.

1. $6.86 \div 7 \quad 2. \quad $2.88 \div 9 \quad 3. \quad $7.48 \div 4 \quad 4. \quad $1.32 \div 6 \quad 5. \quad $9.36 \div 3 \quad 6. \quad $4.95 \div 5

Find the unit cost.

7. 8 jump ropes for $6.96 \quad 8. \quad 5 tropical fish for $7.95 \quad 9. \quad 6 organic apples for $7.44 \quad 10. \quad 4 beach balls for $9.68

Use the hardware store’s price list for Exercises 11–13.

<table>
<thead>
<tr>
<th>Hardware Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rope</td>
<td>3 yards for $6.27</td>
</tr>
<tr>
<td>Chain</td>
<td>5 yards for $5.75</td>
</tr>
<tr>
<td>Twine</td>
<td>9 yards for $2.70</td>
</tr>
</tbody>
</table>

11. Which is cheapest per yard? __________

12. Jackie bought 10 yards of one kind of item and it cost $11.50. What did she buy? __________

13. How many yards of rope did Hans buy if he spent $18.81? __________

Solve. Tell what strategy you used. (Lesson 15–6)

14. Payton visited a modern artist’s exhibit. The first painting was a circle divided into 2 sections. The second was a triangle divided into 4 sections, and the third was a square divided into 5 sections. What do you think the fourth painting looked like?

15. A rowboat can carry 2 adults and 3 children across the lake. How many rowboats are needed to take 8 adults and 12 children across the lake?
15-7

Problem-Solving Practice

Divide Money

Solve.

1. Nate bought 2 hats for $9.20. How much did each one cost?

2. How much does one bottle of water and one banana cost if 6 bottles of water cost $6.12 and 5 bananas cost $3.50?

3. Danielle and Maria have a total of $4.50. How much will they each get if the money is split evenly?

4. Matt’s dad spent $6.50 on two games. How much did the games each cost if they both cost the same?

5. Raffle tickets are $2 each. Allison spent $10 on them. How many raffle tickets did she buy?

6. Sam paid $7.40 for 4 coffee mugs. How much did each one cost?

7. James cuts grass in his neighborhood. He made $6.58 in two days. If he earned the same amount each day, how much did he earn each day?

8. Amy, Sarah, and Lindsay have a total of $6.24. How much will each receive if they share the money equally?
1. Students are selling tickets to a fundraiser for $9 each. Kristi is keeping track of the money for the sale of the tickets. If she has $918, how many tickets have been sold so far?

2. The students set up booths with games and food. One of the booths sells darts to throw at balloons. The total cost for the balloons was $4.50. At 3 cents each, how many balloons did the students get for the booth?

3. At the “Dunk-the-Teacher” booth, students try to hit a target and dunk their teacher. They get to buy three tries for $1. So far, 180 tries have been made and the teacher has gone into the water 70 times. How much money has the booth raised so far?

4. The students plan to keep $200 of the money they raise and divide up the rest equally to give to four charities. If the student raised $4,040, how much will each charity get?

If they divide the money among 5 charities, how much will each get?

5. Andrew is keeping track of the money for the whole fundraiser. Why is it important for him to know where the decimal goes when he is working with the money?
# 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>divide two- and three-digit numbers by a one digit number</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>divide money</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>estimate quotients</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>solve problems by working backward</td>
<td></td>
</tr>
</tbody>
</table>

## Notes

______________________________

______________________________

______________________________

______________________________

______________________________

______________________________

______________________________

______________________________

______________________________
Chapter Diagnostic Assessment

Divide.

1. $18 \div 3 = \underline{\hspace{2cm}}$
2. $24 \div 3 = \underline{\hspace{2cm}}$
3. $36 \div 6 = \underline{\hspace{2cm}}$
4. $45 \div 5 = \underline{\hspace{2cm}}$

Write a number sentence to solve.

5. Ana has 12 stickers. She divides them equally between 4 friends. How many stickers does each friend get?

6. There are 20 students going on the field trip. The teacher splits the students into 5 equal groups. How many students are in each group?

Round to the nearest ten.

7. 29 8. 43
9. 88 10. 64

Round to the nearest hundred.

11. 567 12. 341
13. 789 14. 549

Subtract.

15. $54 - 3 = \underline{\hspace{2cm}}$
16. $89 - 54 = \underline{\hspace{2cm}}$
17. $76 - 12 = \underline{\hspace{2cm}}$
18. $54 - 32 = \underline{\hspace{2cm}}$
Chapter Pretest

Divide.

1. \(800 \div 10 = \) 
2. \(2,700 \div 3 = \)
3. \(64 \div 4 = \)
4. \(440 \div 4 = \)
5. \(3,600 \div 9 = \)
6. \(132 \div 4 = \)

Estimate. Round to the nearest ten.

7. \(182 \div 5 = \)
8. \(497 \div 7 = \)
9. \(389 \div 2 = \)

Estimate. Round to the nearest hundred.

10. \(12,188 \div 6 = \)
11. \(1,190 \div 5 = \)
12. \(6,312 \div 9 = \)

Estimate by rounding.

13. \(24,026 \div 4 = \)
14. \(41,992 \div 6 = \)
15. \(5,534 \div 5 = \)
16. \(7,238 \div 2 = \)
Use basic facts and patterns of zeros to find each quotient.

1. $4 \div 2 = \square$
   $40 \div 2 = \square$
   $400 \div 2 = \square$
   $4,000 \div 2 = \square$

2. $8 \div 2 = \square$
   $80 \div 2 = \square$
   $800 \div 2 = \square$
   $8,000 \div 2 = \square$

Divide.

3. $350 \div 7 = \square$
4. $400 \div 5 = \square$
5. $10,000 \div 5 = \square$

Estimate by rounding.

6. $243 \div 4 = \square$
7. $1,234 \div 6 = \square$
8. $1,399 \div 7 = \square$
9. $409 \div 10 = \square$
10. $213 \div 8 = \square$
Divide.

1. \(77 \div 7 = \)  
2. \(64 \div 4 = \)  
3. \(80 \div 5 = \)  
4. \(320 \div 4 = \)  
5. \(360 \div 6 = \)

Solve. Use the **work backward** strategy.

6. Laura played her drums for a total of 6 hours this week, everyday except Wednesday and Friday. If she practiced 2 hours on Monday, 1 hour on Tuesday, \(\frac{1}{2}\) hour on Thursday, and 1 hour on Saturday, how many hours did she play on Sunday?

7. Patricia finished her research report in 3 days. She completed 2 pages each day. How many pages did she complete in all?

8. Arnold has 50 baseball cards in his collection. He will keep 20 for himself and divide the rest equally among 3 friends. How many baseball cards does each friend get?

9. If Mary gave 3 strawberries to each of 4 friends, and she now has 6 strawberries, how many strawberries did she have to begin with?

10. Stephen has a basket of 20 green peppers, and another basket of green peppers that looks to be about the same size. Would it be reasonable to say he now has around 40 green peppers?
Divide.

1. \[324 \div 6 = \square\]
2. \[423 \div 9 = \square\]
3. \[384 \div 12 = \square\]

Solve.

4. The basketball team left for their away game. They arrived at 6:00 P.M. after 2 hours and 5 minutes of driving. At what time did they leave?

5. Marcia has 350 buttons in her button collection. If she divides them equally in 7 groups, how many buttons will be in each group?

Divide.

6. \[\$4.40 \div 4 = \square\]
7. \[\$8.32 \div 8 = \square\]
8. \[\$7.14 \div 7 = \square\]
9. \[\$6.21 \div 3 = \square\]
10. \[\$7.90 \div 5 = \square\]
Use basic facts and patterns of zeros to find each quotient.

1. \(24 ÷ 3 = \) 
   \(240 ÷ 3 = \)
   \(2,400 ÷ 3 = \)

2. \(18 ÷ 3 = \)
   \(180 ÷ 3 = \)
   \(1,800 ÷ 3 = \)

Divide.

3. \(350 ÷ 5 = \)
4. \(750 ÷ 5 = \)
5. \(2,000 ÷ 4 = \)
6. \(40,000 ÷ 8 = \)

Estimate by rounding.

7. \(364 ÷ 4 = \)
8. \(1,398 ÷ 5 = \)
9. \(239 ÷ 8 = \)

Solve.

10. Abbey is having her ballet class over for a pizza party on Friday night. She invited 10 friends, but 4 of them cannot come to the party. Abbey wants to order 3 slices of pizza for everyone including herself. How many slices of pizza should she order?
Match each word to its definition. Write your answers on the lines provided.

1. dividend ______  
   A. A number close to an exact value.

2. divisor ______  
   B. The answer to a division problem.

3. quotient ______  
   C. A number that is being divided.

4. unit price ______  
   D. The number by which the dividend is being divided.

5. estimate ______  
   E. The price of a single piece or item.
Create a flyer that is similar to an ad for a grocery store. Put the following information on the flyer: (1) canned fruit, 5 for $3; (2) white rice, 2 for $3; and (3) yogurt, 6 for $3.

Show the flyer to the student, then read each question aloud to the student. Write the student’s answers on the lines provided.

1. What is the unit cost for a can of fruit?

2. What is the unit cost for a box of rice?

3. What is the unit cost for a container of yogurt?

4. Tell how you got your answer.

5. How much would it cost if someone wanted to buy 2 containers of yogurt and 1 box of white rice?

6. Explain your answer.
Show the chart to the student, then ask the following questions.

<table>
<thead>
<tr>
<th>Walkers and Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Pedro</td>
</tr>
<tr>
<td>Irene</td>
</tr>
<tr>
<td>Marta</td>
</tr>
<tr>
<td>Manuel</td>
</tr>
</tbody>
</table>

7. About how long did it take Irene to walk 1 mile?

8. Which walker walked the slowest?

9. Which walker walked the fastest?

10. About how long did it take Manuel to walk 1 mile?

11. Tell how you got your answer.

12. Which two walkers walked the closest distance?

13. Explain 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

**Divide by One-Digit Numbers**

**Layered Look Foldable**

<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.

Estimate by rounding.

1. $6 \overline{)357}$
   A. 59  B. 60  C. 65  D. 70
   1. _____

2. $274 \div 9$
   F. 60  G. 50  H. 40  J. 30
   2. _____

Estimate.

3. $4,961 \div 5$
   A. 100  B. 500  C. 1,000  D. 5,000
   3. _____

Divide.

4. $4 \overline{)92}$
   F. 23  G. 24  H. 25  J. 26
   4. _____

5. $2 \overline{)80}$
   A. 60  B. 50  C. 40  D. 20
   5. _____

6. $240 \div 6$
   F. 4  G. 8  H. 40  J. 80
   6. _____

7. $9 \overline{)468}$
   A. 50  B. 51  C. 52  D. 53
   7. _____

8. $7 \overline{)77}$
   F. 11  G. 10  H. 9  J. 7
   8. _____
15

Chapter Test, Form 1  (continued)

9. \(8 \div 3,200\)
   A. 40,000  B. 4,000  C. 400  D. 40  9. _____

Find the unit cost.

10. 7 folders for $2.59
   F. $0.27  G. $0.37  H. $2.70  J. $3.70  10. _____

11. 6 roses for $7.44
   A. $0.12  B. $0.24  C. $1.22  D. $1.24  11. _____

12. 5 pens for $1.15
   F. $1.23  G. $0.77  H. $0.27  J. $0.23  12. _____

Solve.

13. Elyse went apple picking. She picked 32 apples. She put
   4 apples in her compost bin because they were rotten. Then,
   Elyse gave half of the remaining apples to her mother. How
   many apples did Elyse give to her mother?
   A. 16  B. 14  C. 8  D. 7  13. _____

Use the chart for Exercises 14–15.

<table>
<thead>
<tr>
<th>Freddie’s Fruit Stand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples  $3.44 for 8</td>
</tr>
<tr>
<td>Peaches $3.29 for 7</td>
</tr>
<tr>
<td>Peppers $2.46 each</td>
</tr>
<tr>
<td>Melons $3.31 each</td>
</tr>
</tbody>
</table>

14. How many melons did Mr. Nguyen buy if he spent $23.17?
   F. 5  G. 6  H. 7  J. 8  14. _____

15. Compare. Choose >, <, or =.
   unit cost of apples \(\square\) unit cost of peaches
   A. >  B. <  C. =  15. _____
Chapter Test, Form 2A

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

Estimate by rounding.

1. $7 \div 347$
   - A. 49
   - B. 50
   - C. 55
   - D. 60
   - 1. _____

2. $633 \div 9$
   - F. 80
   - G. 70
   - H. 60
   - J. 50
   - 2. _____

Estimate.

3. $3,874 \div 8$
   - A. 8,000
   - B. 5,000
   - C. 800
   - D. 500
   - 3. _____

Divide.

4. $4 \div 76$
   - F. 18
   - G. 19
   - H. 21
   - J. 23
   - 4. _____

5. $3 \div 60$
   - A. 30
   - B. 25
   - C. 20
   - D. 15
   - 5. _____

6. $560 \div 7$
   - F. 7
   - G. 8
   - H. 70
   - J. 80
   - 6. _____

7. $8 \div 464$
   - A. 52
   - B. 56
   - C. 58
   - D. 60
   - 7. _____

8. $9 \div 99$
   - F. 11
   - G. 10
   - H. 9
   - J. 7
   - 8. _____
9. \( 7 \div 4,900 \)
   A. 70,000   B. 7,000   C. 700   D. 70   9. _____

Find the unit cost.

10. 8 muffins for $9.68
    F. $1.11   G. $1.21   H. $1.31   J. $2.42   10. _____

11. 6 erasers $4.68
    A. $0.78   B. $0.88   C. $25.68   D. $28.08   11. _____

12. 3 magazines for $11.37
    F. $2.79   G. $3.69   H. $3.67   J. $3.79   12. _____

Solve.

13. Laura went strawberry picking. She picked 84 strawberries. She ate 8 strawberries. Then, Laura used half of the remaining strawberries to make jelly. How many strawberries did Laura use to make jelly?
    A. 39   B. 38   C. 20   D. 19   13. _____

Use the chart for Exercises 14–15.

<table>
<thead>
<tr>
<th>Vera’s Vegetable Stand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
</tr>
<tr>
<td>$3.64 for 7</td>
</tr>
<tr>
<td>Tomatoes</td>
</tr>
<tr>
<td>$3.10 for 5</td>
</tr>
<tr>
<td>Squash</td>
</tr>
<tr>
<td>$2.53 each</td>
</tr>
<tr>
<td>Pumpkins</td>
</tr>
<tr>
<td>$4.52 each</td>
</tr>
</tbody>
</table>

14. How many pumpkins did Ramon buy if he spent $27.12?
    F. 8   G. 7   H. 6   J. 5   14. _____

15. Compare. Choose >, <, or =.

    unit cost of carrots ______ unit cost of tomatoes
    A. >   B. <   C. =   15. _____
Chapter Test, Form 2B

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

Estimate by rounding.

1. 633 ÷ 9
   A. 70  B. 60  C. 50
   1. _____

2. 7\(\overline{347}\)
   F. 49  G. 50  H. 60
   2. _____

Estimate.

3. 3,874 ÷ 8
   A. 5,000  B. 800  C. 500
   3. _____

Divide.

4. 9\(\overline{99}\)
   F. 11  G. 10  H. 9
   4. _____

5. 3\(\overline{60}\)
   A. 30  B. 25  C. 20
   5. _____

6. 3\(\overline{57}\)
   F. 9  G. 17  H. 19
   6. _____

7. 6\(\overline{204}\)
   A. 34  B. 32  C. 24
   7. _____

8. 7\(\overline{4,900}\)
   F. 70,000  G. 7,000  H. 700
   8. _____
9. \( \frac{76}{4} \)
   \[ \text{A. 18} \quad \text{B. 19} \quad \text{C. 21} \]
   \[ \text{9. } \]

**Find the unit cost.**

10. 3 magazines for $11.37
   \[ \text{F. } $3.69 \quad \text{G. } $3.67 \quad \text{H. } $3.79 \]
   \[ \text{10. } \]

11. 6 erasers $4.68
   \[ \text{A. } $0.78 \quad \text{B. } $0.88 \quad \text{C. } $0.88 \]
   \[ \text{11. } \]

12. 8 muffins for $9.68
   \[ \text{F. } $1.11 \quad \text{G. } $1.21 \quad \text{H. } $1.31 \]
   \[ \text{12. } \]

**Solve.**

13. Ana picked 84 berries. She ate 8 berries. Then, Ana made a pie. She used half of the berries that were left. How many berries did Ana use in the pie?
   \[ \text{A. 39} \quad \text{B. 38} \quad \text{C. 19} \]
   \[ \text{13. } \]

**Use the chart for Exercises 14–15.**

<table>
<thead>
<tr>
<th>Vegetables for Sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots $3.64 for 7</td>
</tr>
<tr>
<td>Tomatoes $3.10 for 5</td>
</tr>
<tr>
<td>Squash $2.53 each</td>
</tr>
<tr>
<td>Pumpkins $4.52 each</td>
</tr>
</tbody>
</table>

14. Ramon paid $27.12 for pumpkins. How many did he buy?
   \[ \text{F. 7} \quad \text{G. 6} \quad \text{H. 5} \]
   \[ \text{14. } \]

15. Compare. Choose >, <, or =.
    \[ \text{unit cost of carrots } \square \text{ unit cost of tomatoes} \]
    \[ \text{A. } > \quad \text{B. } < \quad \text{C. } = \]
    \[ \text{15. } \]
Read each question carefully. Write your answer on the line provided.

Divide.

1. \(3 \div 60\)
2. \(7 \div 4,900\)
3. \(560 \div 7\)
4. \(3 \div 57\)
5. \(9 \div 99\)
6. \(8 \div 464\)

Estimate by rounding.

7. \(633 \div 9\)
8. \(7 \div 347\)

Estimate.

9. \(3,874 \div 8\)

Find the unit cost.

10. 6 erasers for $4.68
11. 8 muffins for $9.68
12. 3 magazines for $11.37
Use the chart for Exercises 13–14.

<table>
<thead>
<tr>
<th>Vera's Vegetable Stand</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
<td>$3.64 for 7</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>$3.10 for 5</td>
</tr>
<tr>
<td>Squash</td>
<td>$2.53 each</td>
</tr>
<tr>
<td>Pumpkins</td>
<td>$4.52 each</td>
</tr>
</tbody>
</table>

13. Compare. Write >, <, or =.
   unit cost of carrots □ unit cost of tomatoes
   13. _____

14. How many pumpkins did Ramon buy if he spent $27.12?
   14. _____

Solve.

15. Nyoko went strawberry picking. She picked 84 strawberries.
   She ate 8 strawberries. Then, Nyoko used half of the remaining strawberries to make jelly. How many strawberries did Nyoko use to make jelly?
   15. _____
Read each question carefully. Write your answer on the line provided.

Divide.

1. $560 \div 7$
2. $3)60$
3. $222 \div 3$
4. $9)99$
5. $3)57$
6. $7)4,900$

Find the unit cost.

7. 6 erasers for $4.68
8. 3 magazines for $11.37
9. 8 muffins for $9.68

Estimate by rounding.

10. $7)347$
11. $633 \div 9$

Estimate.

12. $3,874 \div 8$
Use the chart for Exercises 13–14.

<table>
<thead>
<tr>
<th>Vegetables for Sale</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
<td>$3.64 for 7</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>$3.10 for 5</td>
</tr>
<tr>
<td>Squash</td>
<td>$2.53 each</td>
</tr>
<tr>
<td>Pumpkins</td>
<td>$4.52 each</td>
</tr>
</tbody>
</table>

13. Ramon spent $27.12 on pumpkins. How many pumpkins did he buy?  
14. Compare. Write $>$, $<$, or $=$.
   - unit cost of carrots $>$ unit cost of tomatoes

Solve.

15. Ana picked 84 berries. First, she ate 8 berries. Next, Ana made a pie. She used half of the berries that were left. How many berries did Ana use in the pie?
Read each question carefully. Write your answer on the line provided.

**Find the quotient.**

1. \( 6 \div 4,800 \)
2. \( 8,400 \div 7 \)
3. \( 4 \div 96 \)
4. \( 8 \div 888 \)
5. \( 6 \div 204 \)
6. \( 333 \div 9 \)

**Estimate by rounding.**

7. \( 544 \div 6 \)
8. \( 7 \div 555 \)

**Estimate.**

9. \( 7,795 \div 4 \)

**Find the unit cost.**

10. 8 stickers for $0.72
11. 9 comic books for $21.42
12. 3 bicycles for $886.05
Solve.


Use the sign below for Exercises 14–15.

<table>
<thead>
<tr>
<th>YARD SALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>After 2:00, all items will be sold for half price!</td>
</tr>
</tbody>
</table>

Books
Hardback…4 for $1.24
Paperback…6 for $1.26

Clothing
T-shirts…2 for $1.98
Sweaters…$3.75 each
Dress…$6.89 each

Toys
Dolls…$3.88 each
Board Games…$5.57 each


15. At 2:30, Mr. Nieto spends $15.52 on dolls. How many dolls did he buy? 15.
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. Record your answer on another piece of paper.

1. Explain how to use basic facts and patterns of zeros to divide multiples of 10, 100, and 1,000. Give an example of dividing a multiple of 1,000.

2. Explain how to estimate a quotient by rounding. Give an example using a 3-digit dividend.

3. Harriet’s turtle can walk 345 feet in 5 minutes. How many feet can it walk per minute?
   a. Estimate the answer by rounding. Explain your reasoning.
   b. Find the answer by dividing. Show each step and check your work.

4. The table below shows the cost of items at the supermarket.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canned salmon</td>
<td>9 cans per box</td>
<td>$9.99 / box</td>
</tr>
<tr>
<td>Risotto</td>
<td>4 boxes per carton</td>
<td>$24.60 / carton</td>
</tr>
<tr>
<td>Red potatoes</td>
<td>5 pounds per bag</td>
<td>$4.95 / bag</td>
</tr>
</tbody>
</table>

   a. Find the unit cost for a pound of red potatoes.
   b. Find the unit cost for one can of salmon.
   c. Find the unit cost for a box of risotto.
   d. How much would it cost to buy 3 cans of salmon, 2 boxes of risotto, and 10 pounds of red potatoes?
Use this recording sheet with pages 660–661 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

At the school carnival, 168 students volunteered to help. The students were split evenly between 4 different groups. How many students were in each group?

A. 47    B. 42    C. 36    D. 29

Read the Question

You need to divide to find the number of students volunteering for each group.

Solve the Question

Look for a basic fact to help you divide mentally: 16 ÷ 4 = 4.

The first digit in the quotient is 4, so you can eliminate answer choices C and D.
Divide the ones: 8 ÷ 4 = 2.
168 ÷ 4 = 42.
So, 42 students volunteered for each group.
The answer is B.

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

1. Carolina’s coloring book has 96 pages. She wants to color all of the pages in 12 days. How many pages will she need to color each day?
   A. 9    B. 8    C. 10    D. 15  1. _____

2. A bus can seat 78 people. 3 people can fit on each seat. How many seats are there?
   F. 40    G. 25    H. 35    J. 26  2. _____
3. What number will make each number sentence true?

6 ÷ 2 = □
60 ÷ 2 = 30
600 ÷ 2 = 300

A. 3  B. 30  C. 60  D. 10  3. ______

4. Jennifer did this division problem: 357 ÷ 7 = 57.
   Which problem could she do to check her answer?
   F. 357 − 7 = □  H. 7 + 357 = □
   G. 57 ÷ 7 = □  J. 57 × 7 = □
   4. ______

5. Josephine has 63 winter shirts to pack away in 3 containers.
   How many shirts will go in each container?
   A. 40  B. 20  C. 21  D. 10  5. ______

6. There are 56 hamsters in cages. Each cage holds 7 hamsters.
   How many cages are needed?
   F. 8  G. 12  H. 14  J. 2  6. ______

7. Dave emptied his jar of money on the table.

How much money does Dave have?
   A. $4.56  B. $2.35  C. $1.55  D. $1.45  7. ______

8. 960 marbles are put into 6 bags. Each bag has the same
   number of marbles. How many marbles are in each bag?
   8. ______

9. Samantha read 188 pages of her book over 4 days. She read
   the same number of pages each day. How many pages did
   she read each day?
   9. ______
10. Jacob went to the aquarium. He counted 158 fish in 2 hours. He counted the same number of fish each hour. How many fish did he count each hour?

11. A school has 660 students. The students are separated equally into 30 classrooms. How many students are in each classroom?

12. What expression describes the array shown below?

13. Which shape is pictured below?

14. What number makes this number sentence true?

\[ 4 + 2 + 1 = 1 + 2 + \square \]
End-of-Year Test

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

1. Write in standard form:
sixty-one thousand, eight hundred ten

2. Round to the nearest hundred: 4,081

3. Add: 6,091 + 2,309

Compare. Write >, <, or =.

4. 14,785  □  14,875

5. 12 × 0  □  3 × 1

6. 12 grams  □  12 kilograms

7. $18.18 × 4  □  $20.20 × 5

8. 900 × 5  □  90 × 50

Find each missing number.

9. 7 + □ = 6,582

10. □ × 9 = 72

11. 8 × 5 × 10 = 5 × □ × 8

Solve.

12. Elsie buys a movie ticket for $5.95. At the movies, she buys a healthy snack for $3.39. How much did Elsie spend in all?

13. 7,081 – 342 = □

14. There are 141 students entering the science fair. 26 of the students are in third grade and 58 of the students are in fourth grade. The rest of the students are in fifth grade. How many of the students are in fifth grade?
End-of-Year Test (continued)

15. $9 \times 10 = \underline{90}$

16. $7 \times 6 = \underline{42}$

17. Andy has 2 dogs and 3 cats. How many feet do the animals have in all?

18. There are 30 students in a class. The teacher puts the students into 6 equal groups. How many students are in each group?

19. $45 \div 5 = \underline{9}$

20. Which is the better buy?
   - 4 hats for $20
   - 3 hats for $18

21. Which symbol (+, −, ×, or ÷) makes the equation true?
   
   $47 - 17 = 10 \underline{3}$

22. Joe, Nate, and Chang each buy a sandwich for dinner. Each sandwich has the same price. Their total cost is $21. How much did each sandwich cost?

Convert each unit.

23. $\underline{300}$ minutes = 5 hours

24. $16$ quarts = $\underline{4}$ gallons

25. $7$ meters = $\underline{7000}$ millimeters

26. Which unit, inches or feet, is most appropriate to measure the length of a pencil?
27. Find the perimeter.

### Question 27

![Triangle Diagram]

28. Identify the triangle as equilateral, isosceles, or scalene.

### Question 28

![Equilateral Triangle Diagram]

29. Identify the quadrilateral.

### Question 29

![Quadrilateral Diagram]

---

Use the bar graph for Exercises 30 and 31.

### Bar Graph

**Favorite Fruit Juice**

- **Apple**: 8 students
- **Grape**: 6 students
- **Orange**: 10 students
- **Pineapple**: 2 students
30. Which type of juice did the least number of students choose?

31. Complete the statement below to make it true. Write more, less, or equally.
   Students were _____ likely to choose orange juice than grape juice.

Solve.

32. Manuel picked one of the cards below. What is the probability that he picked an odd number? Write certain, likely, unlikely, or impossible.

   3 7 2 1 9 9

33. \( \frac{7}{13} - \frac{2}{13} = \) ______

34. Jim has 20 crayons. \( \frac{1}{4} \) of the crayons are blue. 5 of the crayons are red. The rest of the crayons are yellow. How many crayons are yellow?

35. Write 0.7 as a fraction.

36. Write \( \frac{58}{100} \) as a decimal.

37. Write a fraction for the part of a dollar represented.

38. \( $34.08 \times 3 = \) ______

39. \( 5 \div 840 \)

40. A rectangle has an area of 116 square yards and a width of 4 yards. What is the length of the rectangle?
# Chapter 15 Assessment Answer Key

Page 67, 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>
In addition to the scoring rubric found on page A27, the following sample answers may be used as guidance in evaluating open-ended assessment items.

1. To use basic facts and patterns of zeros to divide multiples of 10, 100, and 1,000, follow three steps. For example, find 1,600 ÷ 4. Step 1: Drop the zeros to get 16 ÷ 4. Step 2: Divide 6 ÷ 4 = 4. Step 3: Add the zeros back, so 1,600 ÷ 4 = 400.

2. To estimate a quotient by rounding, round the number to the nearest ten or hundred that has a basic fact you can use. Then use the pattern of zeros to divide. For example, to estimate 631 ÷ 7, round down to 630. Drop the zero to get 63 ÷ 7. Divide using the basic fact that 63 ÷ 7 = 9. Then add the zero back, so 630 ÷ 7 = 90.

3. a. Compatible numbers are easy to divide mentally. To estimate 552 ÷ 8, use a number close to 552 that is easy to divide by 8, such as 560. Divide 56 ÷ 8 = 7. Add the zero back, so 560 ÷ 8 is about 70.

b. To find 552 ÷ 8, divide the hundreds. Since 5 < 8, there are not enough hundreds to divide, so divide 55 ÷ 8. Bring down the ones to divide 72 ÷ 8.

Check: 69 × 8 = 552. The product is the same as the dividend, so 552 ÷ 8 = 69.

4. a. Divide the cost per bag by the number of pounds in the bag: $4.95 ÷ 5 = $0.99. The unit cost for one pound of potatoes is $0.99.

b. Divide the cost per box by the number of cans in a box: $9.99 ÷ 9 = $1.11. The unit cost for one can of salmon is $1.11.

c. Divide the cost per carton by the number of boxes per carton: $24.60 ÷ 4 = $6.15. The unit cost for one box of risotto is $6.15.

d. Multiply the quantity of each item by its unit cost, then add the products: (3 × $1.11) + (2 × $6.15) + (10 × $0.99) = $3.33 + $12.30 + $9.90 = $25.53. It would cost $25.53 to buy 3 cans of salmon, 2 boxes of risotto, and 10 pounds of red potatoes.
**Anticipation Guide**

**Divide by One-Digit Numbers**

**Before you begin Chapter 15**

- 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>Division Term</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend</td>
<td>A number that is being divided.</td>
<td>In $9 \div 3$, 9 is the dividend.</td>
</tr>
<tr>
<td>Divisor</td>
<td>The number by which the dividend is being divided.</td>
<td>In $9 \div 3$, 3 is the divisor.</td>
</tr>
<tr>
<td>Quotient</td>
<td>Numbers that are easy to divide.</td>
<td>In $12 \div 2 = 6$, 6 is the quotient.</td>
</tr>
<tr>
<td>Unit Price</td>
<td>The price of a single piece or item.</td>
<td>If 3 gallons of milk are $10.50, the unit price for 1 is $3.50.</td>
</tr>
<tr>
<td>Estimate</td>
<td>A number close to an exact value.</td>
<td>An estimate for $2.99 is $3.00.</td>
</tr>
</tbody>
</table>

**After you complete Chapter 15**

- 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.
Divide Multiples of 10, 100, and 1,000

You can use models to divide multiples of 10.

Find 120 ÷ 3.
First model 120. Then divide the models into 3 groups.

So, 120 ÷ 3 = 40.

Use basic facts and division patterns to divide.

Find 100 ÷ 2.
If 10 ÷ 2 = 5,
then 10 tens ÷ 2 = 5 tens.
So, 100 ÷ 2 = 50.

Write a division sentence. Then solve.

1. \(60 ÷ 3 = 20\)

2. \(100 ÷ 2 = 50\)

3. An engineer estimates that a job will take 640 hours. If the engineer works 8 hours each day, how many days will it take to finish the job? \(80 \text{ days}\)

4. The engineer gives part of the job to 4 workers. If they each work the same number of hours and they work a total of 200 hours, how many hours do they each work? \(50 \text{ hours}\)

Divide.

5. \(600 ÷ 2 = 300\)
6. \(60 ÷ 6 = 10\)
7. \(30 ÷ 3 = 10\)
8. \(70 ÷ 7 = 10\)
9. \(1,800 ÷ 2 = 900\)
10. \(60 ÷ 2 = 30\)
11. \(270 ÷ 3 = 90\)
12. \(250 ÷ 5 = 50\)
13. \(6,300 ÷ 7 = 900\)
14. \(300 ÷ 5 = 60\)
15. \(320 ÷ 4 = 80\)
16. \(160 ÷ 2 = 80\)
17. \(2,800 ÷ 4 = 700\)

Divide. You may use base-ten blocks.

5. \(21 \times 10 = 210\)
6. \(41 \times 20 = 820\)
7. \(8 \times 240 = 1,920\)
8. \(6 \times 180 = 1,080\)
9. \(5 \times 73,500 = 367,500\)
10. \(9 \times 2,700 = 24,300\)
11. \(3 \times 90 = 270\)
12. \(5 \times 4,000 = 20,000\)
Lesson 15–1

Homework Practice

Divide Multiples of 10, 100, and 1,000

Use basic facts and patterns of zeros to find each quotient.

1. \(8 ÷ 2 = \boxed{4}\)
   \(80 ÷ 2 = \boxed{40}\)
   \(800 ÷ 2 = \boxed{400}\)
   \(8,000 ÷ 2 = \boxed{4,000}\)

2. \(63 ÷ 7 = \boxed{9}\)
   \(630 ÷ 7 = \boxed{90}\)
   \(6,300 ÷ 7 = \boxed{900}\)
   \(63,000 ÷ 7 = \boxed{9,000}\)

3. \(27 ÷ 9 = \boxed{3}\)
   \(270 ÷ 9 = \boxed{30}\)
   \(2,700 ÷ 9 = \boxed{300}\)
   \(27,000 ÷ 9 = \boxed{3,000}\)

4. \(10 ÷ 5 = \boxed{2}\)
   \(100 ÷ 5 = \boxed{20}\)
   \(1,000 ÷ 5 = \boxed{200}\)
   \(10,000 ÷ 5 = \boxed{2,000}\)

Divide.

5. \(3,600 ÷ 4 = \boxed{900}\)
   \(700 ÷ 7 = \boxed{100}\)
   \(56,000 ÷ 8 = \boxed{7,000}\)

8. The Espinoza triplets want to put together a puzzle that has 1,500 pieces. If each one puts together the same number of pieces, how many pieces does each triplet have to put together?

   \(500\) puzzle pieces

9. A farmer has 24,000 acres of land. He wants to divide it evenly among 8 different crops. How much land does each crop get?

   \(3,000\) acres

Problem-Solving Practice

Divide Multiples of 10, 100, and 1,000

Solve.

1. After working for 3 weeks, Pat earned $600. How much did he earn each week?

   \(\boxed{200}\) each week

2. The office supply store has 20 boxes of folders left that are on sale. There are 800 folders in all. How many folders are in each box?

   \(\boxed{40}\) folders

3. The computer printer has 240 sheets of paper in it. Each student prints out an 8-page book report. Now the printer is empty. How many students printed out their reports?

   \(\boxed{30}\) students

4. Mr. Wilson will give out 120 textbooks to the class. Each student will get 6 textbooks. How many students are in the class?

   \(\boxed{20}\) students

5. Theo spent a total of $560 in 8 weeks. He spent the same amount each week. He spent $30 per week on food, and he paid bills with the rest of the money. How much did he spend each week on bills?

   \(\boxed{40}\) each week

6. It took 2,400 seconds for Megan to finish her science and math homework. Each assignment took the same amount of time to complete. Was this more or less than 1 hour for each assignment? Explain.

   less; each assignment took 20 minutes.

Multiply. (Lesson 14–8)

10. \(7 \times 3.67 = \boxed{25.69}\)

11. \(9 \times 9.50 = \boxed{85.50}\)

12. \(2.19 \times 4 = \boxed{8.76}\)

13. \(8.25 \times 4 = \boxed{33.00}\)

Spiral Review

Copyright © Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.
### Enrich: Looking at Division Patterns

Tell if the pattern is a multiple of 10, 100, or 1,000. Then write the missing numbers on the lines.

1. \(\underline{4,700} \quad \underline{4,600} \quad \underline{4,500}\) 4,400, 4,300, 4,200, 4,100
   - Multiples of \(10\) and \(100\)

2. 280, \(\underline{270}\), 260, \(\underline{250}\), \(\underline{240}\), 230
   - Multiples of \(10\)

3. 63,000, 64,000, \(\underline{65,000}\), \(\underline{66,000}\), \(\underline{67,000}\)
   - Multiples of \(10, 100,\) and \(1,000\)

Divide the numbers in the middle ring by the number in the center. Write the quotient on the outside ring.

**Sample answer:** Take off the same number of zeros from the dividend and the divisor to get the answer.

How are the problems \(70 \div 10\), \(700 \div 100\), and \(7,000 \div 1,000\) and their quotients alike? How are they different?

**Sample answer:** Each has the same quotient of 7, each problem has the same number of zeros in the divisor and the dividend.

---

### Reteach: Estimate Quotients

You can use rounding and basic facts to help you estimate quotients.

**Estimate 375 \div 6.**

Round 375 to the nearest ten that has a basic fact you can use.

- \(6 \times 1 = 6\)
- \(6 \times 2 = 12\)
- \(6 \times 3 = 18\)
- \(6 \times 4 = 24\)
- \(6 \times 5 = 30\)
- \(6 \times 6 = 36\)
- \(6 \times 7 = 42\)
- \(6 \times 8 = 48\)
- \(6 \times 9 = 54\)
- \(6 \times 10 = 60\)

Try 360 \(\div 6 = 60\). Try 420 \(\div 6 = 70\).

So, 375 \(\div 6\) is about 60.

**Estimate by rounding. Circle the basic fact you used.**

1. \(184 \div 4\) \(\underline{50}\)
   - \(180 \div 3\)
   - \(200 \div 4\)

2. \(110 \div 5\) \(\underline{20}\)
   - \(100 \div 5\)
   - \(120 \div 6\)
   - \(100 \div 2\)

3. \(280 \div 3\) \(\underline{90}\)
   - \(270 \div 3\)
   - \(210 \div 3\)
   - \(280 \div 4\)

4. \(405 \div 8\) \(\underline{50}\)
   - \(400 \div 5\)
   - \(400 \div 8\)
   - \(320 \div 8\)

5. \(300 \div 7\) \(\underline{40}\)
   - \(210 \div 7\)
   - \(300 \div 6\)
   - \(280 \div 7\)

6. \(57 \div 2\) \(\underline{30}\)
   - \(56 \div 7\)
   - \(60 \div 2\)
   - \(60 \div 2\)

**Estimate by rounding. Write the equation you used to solve.**

7. \(370 \div 6\) \(\underline{60}\)
   - \(360 \div 6\)
   - \(180 \div 9\) \(\underline{20}\)
   - \(200 \div 9\) \(\underline{20}\)
   - \(120 \div 4\) \(\underline{30}\)

8. \(490 \div 9\) \(\underline{50}\)
   - \(450 \div 9\)
   - \(240 \div 3\) \(\underline{80}\)
   - \(240 \div 3\) \(\underline{80}\)
   - \(720 \div 8\) \(\underline{90}\)

**Estimates may vary.**
Skill Practice

Estimate Quotients

Estimates may vary. Possible estimates are given.

Estimate by rounding.

1. 6|663
   2. 7|562
   3. 9|359
   4. 8|390
   5. 3|274
   6. 3|118
   7. 7|214
   8. 5|392
   9. 2|156
  10. 2|142
  11. 6|421
  12. 6|361

13. 301 ÷ 5 60
    14. 242 ÷ 3 80
    15. 492 ÷ 7 70

16. 563 ÷ 8 70
    17. 204 ÷ 5 40
    18. 122 ÷ 2 60

ALGEBRA Compare. Write > or <.

19. 100 ÷ 2 > 40
    20. 90 ÷ 3 < 40
    21. 150 ÷ 3 < 60

22. 270 ÷ 9 = 30
    23. 250 ÷ 5 < 60
    24. 400 ÷ 8 < 70

Solve.

25. There are 390 students going on a trip to a factory. They fill 5 buses. Each bus holds the same number of students. About how many students does each bus hold?
   about 80 students

26. At the factory tour, the guide tells the students that each worker makes an average of 250 parts each day. About how many parts each hour does a worker make during an 8-hour day?
   about 30 parts

Spiral Review

10. 18 ÷ 3 = 6
    11. 16 ÷ 2 = 8
    12. 36 ÷ 4 = 9
    180 ÷ 3 = 60
    160 ÷ 2 = 80
    360 ÷ 4 = 90
    1,800 ÷ 3 = 600
    1,600 ÷ 2 = 800
    3,600 ÷ 4 = 900

Divide. Use patterns.

13. 8,000 ÷ 4 = 2,000
    14. 250 ÷ 5 = 50
    15. 45,000 ÷ 9 = 5,000

16. Five juice machines can hold 500 cans. How many cans of juice can each machine hold?
   100 cans
Estimate the quotients. Then write the letter that matches each quotient on the line below to solve the mystery question.

R T E O N
39 ÷ 4 127 ÷ 5 19 ÷ 10 77 ÷ 2 541 ÷ 9

10 26 2 40 60

Estimate the quotients for these problems by rounding the dividend to the nearest 100.

O S U T I
3,641 ÷ 9 480 ÷ 5 6,332 ÷ 7 321 ÷ 6 5,623 ÷ 8

400 100 900 50 700

Estimate the quotients for these problems by rounding the dividend to the nearest 1,000.

A D T E M
7,654 ÷ 8 80,913 ÷ 9 45,327 ÷ 9 3,444 ÷ 5 2,194 ÷ 4

1,000 9,000 5,000 600 500

What should you do if you do not need an exact answer to a division problem?

R O U N D T O
10 400 900 60 9,000 26 40

E S T I M A T E
2 100 50 700 500 1,000 5,000 600

Estimate the quotients for these problems by rounding the dividend to the nearest 10.

Estimate the quotients for these problems by rounding the dividend to the nearest 100.

Estimate the quotients for these problems by rounding the dividend to the nearest 1,000.

1. Amy feeds the 4 class hamsters the same amount of food each day. She has 22 ounces of food. About how many ounces of food does each hamster get per day?

about 5 ounces

2. In art class, Cory is making paper chains. It takes him 6 minutes to make each chain. There are about 28 minutes left in class. About how many more chains can he make?

about 5 more chains

3. Lorrie is emptying her sister’s wading pool with a pump. The pool holds 142 gallons. Each minute the pump removes 7 gallons of water. About how many minutes will it take to empty the pool?

about 20 minutes

4. The third graders have raised $282 for their class trip to the Wildride Amusement Park. Admission to the park is $9. There are 30 students in the third grade. Do they have enough money for admission for all of them? Explain your answer.

yes; $270 is close to $282 and is easy to divide by 9, so $270 ÷ 9 = 30; since $282 ÷ 9 > 30, they have raised enough for at least 30 students.

5. Nina and her three friends are running a relay race. The total distance is 3,210 meters. Each person runs the same distance. About how many meters does each friend run?

about 800 meters

6. The total distance around the Kennington Village Square is 3,928 feet. About how long is one side of the village square?

about 1,000 feet
Answers

Grade 3

15–3

Name ___________________________ Date __________

Reteach

Two-Digit Quotients

Find $64 \div 4$.

Step 1

Decide if there are enough tens for 4 groups.

\[ \begin{array}{c}
\hline
4 & 64 \\
\hline
-4 & 64 \\
\hline
\end{array} \]

\[ \text{There are enough tens, so the first digit goes in the tens place.} \]

Step 2

Divide the tens into 4 groups

\[ \begin{array}{c}
\hline
1 & \text{ten in each group} \\
\hline
4 & 64 \\
-4 & 64 \\
\hline
2 & \text{tens left} \\
\hline
\end{array} \]

Bring down the ones.

Step 3

Regroup 2 tens 4 ones as 24 ones. Divide the ones into 4 groups.

\[ \begin{array}{c}
\hline
16 & \text{ones in each group} \\
\hline
-4 & 64 \\
-24 & 24 \text{ ones to start} \\
-24 & \text{ones used} \\
\hline
0 & \text{ones left} \\
\hline
\end{array} \]

So, $64 \div 4 = 16$.

Divide. Use models if needed. Check your answer.

1. \[ \begin{array}{c}
2 & \text{8} \\
3 & \hline
6 & \text{4} \\
\hline
2 & \text{4} \\
\hline
0 & \text{0} \\
\hline
\end{array} \]

2. \[ \begin{array}{c}
1 & \text{9} \\
5 & \hline
4 & \text{5} \\
\hline
0 & \text{0} \\
\hline
\end{array} \]

3. \[ \begin{array}{c}
2 & \text{2} \\
4 & \hline
8 & \text{8} \\
\hline
8 & \text{8} \\
\hline
0 & \text{0} \\
\hline
\end{array} \]

Divide. Use models if needed. Check your answer.

13. \[ \begin{array}{c}
3 & \text{1} \\
5 & \hline
1 & \text{2} \\
\hline
0 & \text{0} \\
\hline
\end{array} \]

14. \[ \begin{array}{c}
2 & \text{4} \\
6 & \hline
4 & \text{4} \\
\hline
0 & \text{0} \\
\hline
\end{array} \]

15. \[ \begin{array}{c}
3 & \text{2} \\
7 & \hline
5 & \text{5} \\
\hline
0 & \text{0} \\
\hline
\end{array} \]

16. \[ \begin{array}{c}
1 & \text{1} \\
5 & \hline
0 & \text{0} \\
\hline
\end{array} \]

17. \[ \begin{array}{c}
1 & \text{5} \\
5 & \hline
0 & \text{0} \\
\hline
\end{array} \]

Solve.

33. Dave earns $70 for cleaning a house. He splits the money equally with a helper. How much money do they each get?

\[ \text{\$35 each} \]

34. Ruby earns $96 in tips at her job as a waitress. She divides her money into 3 equal amounts for taxes, spending, and saving. How much money does she have for spending?

\[ \text{\$32} \]
**Homework Practice**

**Two-Digit Quotients**

Divide. Use models if needed. Check your answer.

1. \(96 \div 2 = 48\)
2. \(72 \div 8 = 9\)
3. \(85 \div 5 = 17\)

Complete each table.

<table>
<thead>
<tr>
<th>Rule: Divide by 5</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>65</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>70</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>75</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule: Divide by 3</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>72</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>78</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>84</td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

6. **Rule: Divide by 6**

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>8</td>
</tr>
<tr>
<td>72</td>
<td>12</td>
</tr>
<tr>
<td>78</td>
<td>13</td>
</tr>
<tr>
<td>84</td>
<td>14</td>
</tr>
</tbody>
</table>

Divide. Use models if needed. Check your answer.

7. Yuki swam 93 feet across the pool in 10 seconds. How many yards is that?

8. Frank has 76 quarters in his pocket. How many dollars is that?

**Estimates may vary. Possible estimates are given.**

Estimate by rounding. (Lesson 15–2)

9. \(198 \div 4\)  
   about 50

10. \(564 \div 7\)  
    about 80

11. \(8,056 \div 2\)  
    about 4,000

12. To raise money for new uniforms, the student marching band must sell 688 concert tickets in a week. About how many tickets do they have to sell per day?

   about 100 tickets per day

**Problem-Solving Practice**

**Two-Digit Quotients**

Estimate first. Then divide.

1. At the Royce School there are 48 cars in the teachers' parking lot. The same number of cars are parked in each of 3 rows. How many cars are parked in each row?

   \(16\) cars

2. The art teacher has a collection of 56 paintbrushes. He puts the same number of brushes into 4 different sections of his art box. How many brushes are in each section?

   \(14\) brushes

3. Clare works at a laundromat. She will wash 72 pairs of pants. The washing machine can wash 6 pairs of pants for each load of laundry. How many loads of laundry will she need to do to wash all of the pants?

   \(12\) loads

4. For a class project, Marty has 72 pieces of pasta. He is pasting the pasta into 6 equal rows on poster board. How many pieces will be in each row?

   \(12\) pieces

5. Gina has 42 pennies in her bank and 23 pennies in her wallet. She wants to exchange the pennies for nickels. How many nickels will she get?

   \(13\) nickels

6. There are 19 boys and 17 girls in the third grade. Each day, 3 students will give an oral report. About how many days will students be giving oral reports?

   \(12\) days
Grade 3

Chapter 15

Name _____________________ Date _____________________

15–4

Reteach

Problem-Solving Strategy

Work Backward

Aretha rode on a bus for 2 miles from home to the train station. Then she took a train to the city. She returned home the same way. She traveled 16 miles total. How many miles did she travel on the train each way?

Step 1
Understand

What do you need to find?

You need to find how many miles she traveled each way on the train.

Step 2
Plan

Make a plan.

Work backward.

Step 3
Solve

Carry out your plan.

Step 1
Find the number of miles each way.

16 ÷ 2 = 8

Step 2
She traveled 2 miles on the bus each way.

8 – 2 = 6

She traveled 6 miles each way on the train.

Step 4
Check

Check your answer.

Make sure your answer is reasonable.

Solve. Use the work backward strategy.

1. The South Sound Ferry has a snack bar. Drinks cost $1 and hamburgers cost $3. Julia has $1 drink and 1 hamburger. Julia and Harry spend $12 altogether. If Harry buys the same number of each item, how many drinks and hamburgers does he have? 3 children

2. Tickets for the ferry are $5 for adults and $2 for children. The Lin family spends $16 to ride the ferry. How many children do Mr. and Mrs. Lin have? 3 children

Name _____________________ Date _____________________

15–3

Enrich

Bats about These Facts

Solve each problem. Then use the quotient in that problem to fill in the blank in the bat fact below the problem.

1. 150 ÷ 3 = 50

Bats have been around for _______ million years.

2. 102 ÷ 6 = 17

There are at least ______ families of different bats in North America.

3. 128 ÷ 4 = 32

The oldest known bat lived to be about _______ years old.

4. 140 ÷ 7 = 20

There are nearly ______ million free-tailed bats living in colonies in Bracken, Texas. They eat about 250 tons of insects each night!

5. 135 ÷ 9 = 15

The smallest species of bat, the Bumblebee bat, has a wingspan of ______ cm. It weighs about the same as a penny. The largest bats, the flying foxes in Africa, have wingspans of 6 feet.

6. 36 ÷ 3 = 12

Some bats eat about ______ mosquitoes each minute. That’s about 700 an hour.

7. 198 ÷ 6 = 33

Bats help farmers by eating ______ million beetles that could ruin crops during the summer.

Copyright © Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.
3. Marisol and her sister Marta spend $3.20 on two bus tickets to the carnival. Once at the carnival, Marisol buys a popcorn for $4.25 and Marta buys a hot dog for $2.75. They each get a caramel apple, which cost $1.50 each. If they began with $20.00 to share and need to save at least $3.20 to get back home, do they have any money to spend after eating? How much?

Yes; Marisol and Marta have $3.60 left to spend.

4. Bethany and Andrey want to go to the library. Andrey lives 10 blocks away from the library. Bethany will be walking from the park, which is 7 blocks away from Andrey’s house. If Bethany stops first to pick up Andrey, how many total blocks will she walk to the library? How many more blocks will she walk than Andrey?

Bethany will walk a total of 17 blocks; she will walk 7 more blocks than Andrey.

5. Samantha’s mother has given her 2 hours to play any of her 4 favorite video games. It will take her 30 minutes to play one game and 45 minutes to play another. The third game takes 20 minutes to play and the fourth games takes one hour and 20 minutes. List three different combinations of games Samantha can play completely in the amount of time her mother has given her.

Samantha can play the 30-minute game, the 45-minute game, and the 20-minute game, or she can play the 20-minute game and the game that takes one hour and 20 minutes or she can play the 30-minute game and the game that takes one hour and 20 minutes.

1. There are 4 rows of seats in the first-class part of a plane. There is a business-class part of the same plane. If there are 4 seats in each row and 40 seats on the entire plane, how many rows of seats are there in the business-class section?

2 rows

2. Mr. and Mrs. Lopez take several members of the school’s theater club to a show. Adult tickets cost $9 and student tickets cost $5. They spend $38 on tickets. How many students did Mr. and Mrs. Lopez take?

4 students

3. Mr. and Mrs. Jefferson take their 3 children to a Revolutionary War fort. Tickets cost $7 for adults and $5 for children. How much do the Jeffereyons spend?

$29


$5

5. Mr. Hong takes a bus to the city. He arrives at a business meeting at 9:00 A.M. The bus ride takes 30 minutes. Then he takes a subway to get to a meeting. The subway ride takes 15 minutes. What time did he leave his house?

8:15 A.M.

6. Eight passengers each took 2 suitcases on a plane. 32 passengers each took one suitcase. How many suitcases did the passengers take on the plane in all?

48 suitcases
**Homework Practice**

**Problem-Solving Strategy**

1. Olivia is packing for vacation. Her large suitcase will fit 36 items of clothing and her small suitcase will fit 18 items of clothing. If she wants to bring 60 items of clothing, how many will she have to leave behind?

   **6 items**

2. Gavin is saving up to buy a new bicycle. The one he wants costs $125. His mother is giving him $50, but he will have to earn the rest by mowing lawns for $5 each. How many lawns will he have to mow before he can buy the bicycle?

   **15 lawns**

3. It's 2 P.M. and Marvin needs to finish reading a 150-page book before returning it to the library at 5 P.M. He has already read 90 pages of the book. How many pages an hour does he have to read to return the book on time?

   **20 pages per hour**

4. Francesca is a flower girl in a wedding. She has to drop rose petals on the ground with every step she takes down the aisle. If her basket holds 360 rose petals, about how many petals can she drop each time?

   **about 40 rose petals**

**Divide. Use models if needed. (Lesson 15–3)**

5. $87 \div 3 = 29$

6. $72 \div 6 = 12$

7. $86 \div 2 = 43$

**Complete each table.**

8. (Table with Input and Output columns)

9. (Table with Input and Output columns)

10. (Table with Input and Output columns)

**Answers**

1. $135 \div 3 = \underline{45} \div 5 = \underline{9} \div 1 = \underline{9}$ h

2. $360 \div 4 = \underline{90} \div 3 = \underline{30} \div 5 = \underline{6}$ d

3. $880 \div 2 = \underline{440} \div 4 = \underline{110} \div 10 = \underline{11}$ n

4. $567 \div 9 = \underline{63} \div 7 = \underline{9} \div 3 = \underline{3}$ t

5. $936 \div 4 = \underline{234} \div 6 = \underline{39} \div 3 = \underline{13}$ o

6. $1,000 \div 10 = \underline{100} \div 4 = \underline{25} \div 5 = \underline{5}$ s

7. $672 \div 6 = \underline{112} \div 7 = \underline{16} \div 8 = \underline{2}$ u

8. $345 \div 5 = \underline{69} \div 3 = \underline{23} \div 1 = \underline{23}$ a

**Riddle:** If you start spelling the words for the numbers, beginning with one, how far would you have to go before you used the letter "a"?

- 1. 135
- 2. 360
- 3. 880
- 4. 567
- 5. 936
- 6. 1,000
- 7. 672
- 8. 345

**Answer:** tt hh oo uu ss aa nn dd
Reteach

**Three-Digit Quotients**

Find 387 ÷ 3.

**Step 1**
Decide if there are enough hundreds for 3 groups.

\[
\begin{array}{c}
3 \div 3 = \boxed{3} \\
\text{There are enough hundreds.}
\end{array}
\]

**Step 2**
Divide the hundreds into 3 groups.

\[
\begin{array}{c}
1 \text{ hundred} \\
\boxed{3} \div \boxed{3} = \boxed{1} \text{ in each group} \\
- \boxed{3} \div \boxed{3} = \boxed{1} \text{ hundreds used} \\
\boxed{0} \div \boxed{3} = \boxed{0} \text{ no hundreds left} \\
\boxed{1} \div \boxed{2} = \boxed{1} \text{ tens} \\
\boxed{2} \div \boxed{2} = \boxed{0} \text{ tens}
\end{array}
\]

**Step 3**
Divide the tens into 3 groups.

\[
\begin{array}{c}
12 \text{ tens} \\
\boxed{3} \div \boxed{3} = \boxed{1} \text{ group} \\
- \boxed{3} \div \boxed{3} = \boxed{1} \text{ tens used} \\
\boxed{6} \div \boxed{2} = \boxed{3} \text{ tens left}
\end{array}
\]

**Step 4**
Regroup 2 tens 7 ones as 27 ones. Divide the ones into 3 groups.

\[
\begin{array}{c}
129 \text{ ones} \\
\boxed{3} \div \boxed{3} = \boxed{1} \text{ group} \\
- \boxed{3} \div \boxed{3} = \boxed{1} \text{ ones used} \\
\boxed{6} \div \boxed{2} = \boxed{3} \text{ ones left} \\
- \boxed{27} \div \boxed{0} = \boxed{0} \text{ no ones left}
\end{array}
\]

So, 387 ÷ 3 = 129.

**Skills Practice**

**Three-Digit Quotients**

Divide. Check your answers.

\[
\begin{array}{cccc}
1. & 114 & 55 & 49 & 88 \\
2. & 127 & 58 & 289 & 87 \\
3. & 149 & 217 & 28 & 58 \\
4. & 225 & 32 & 191 & 31 \\
5. & 72 & 72 & 462 & 159 \\
6. & 21.875 \div 7 = 125 & 22.528 \div 3 = 76 & 23.385 \div 5 = 77 \\
7. & 34.974 \div 2 = 487 & 25.852 \div 3 = 284 & 26.432 \div 8 = 54 \\
8. & 27.632 \div 8 = 79 & 28.204 \div 3 = 68 & 29.420 \div 5 = 84 \\
9. & 30.896 \div 2 = 448 & 31.476 \div 4 = 119 & 32.234 \div 2 = 117 \\
\end{array}
\]

Solve.

33. Betsy and her brother split the cost of lemons for their lemonade stand. They spent a total of 298¢. How much did each pay?

\[
\frac{149¢ \text{ each}}{16 \text{ glasses}}
\]

34. The lemonade container holds 128 ounces. How many 8-ounce glasses of lemonade does the container hold?

\[
\frac{16 \text{ glasses}}{}
\]
Name

Date

Grade 3

Copyright © Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.

Chapter Resources

Chapter 15

Problem-Solving Practice

Three-Digit Quotients

Solve.

1. Megan divides 147 carrots equally into plastic snack bags. If she puts 7 carrots in each bag, how many plastic snack bags does she need?

   snack bags

2. Mrs. Ruiz has 126 baseball cards. She gives an equal amount to each of her 3 children. How many does each child get?

   baseball cards

3. Elizabeth is making large candles. She has 228 pounds of wax. Each candle will use 6 pounds of wax. How many candles can Elizabeth make?

   candles

4. Myla is the coach of the Pearson Sack Race Club. The club has 156 sacks and 7 members. After practice, each member takes home any sacks that are left over. If each member takes home as many sacks as possible, how many does Myla take home?

   sacks

5. Larry plays on the school basketball team. He scored a total of 134 points in 5 games, and he scored the same number of points in each of the first 4 games. In the last game he scored 30 points. How many more points did he score in the last game than in any of the other 4 games?

   more points

6. Rick plans to make 6 large birdhouses and 2 small ones. He will use a total of 148 nails. Each small birdhouse uses 8 nails. If each large birdhouse uses the same number of nails, how many nails will be used for each large birdhouse?

   nails

Name

Date

Grade 3

Copyright © Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.

Homework Practice

Three-Digit Quotients

15–5

Divide. Check your answers.

1. \(984 \div 2 = \) 492

2. \(625 \div 5 = \) 125

3. \(791 \div 7 = \) 113

4. \(558 \div 9 = \) 62

5. \(873 \div 3 = \) 291

6. \(356 \div 4 = \) 84

Use the table for Exercises 7–10.

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Bottles in a Box</th>
<th>Total Number of Tablets in a Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td>6</td>
<td>810 tablets</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>8</td>
<td>912 chewable tablets</td>
</tr>
<tr>
<td>calcium supplements</td>
<td>5</td>
<td>605 chewable tablets</td>
</tr>
<tr>
<td>multi-vitamins</td>
<td>9</td>
<td>945 tablets</td>
</tr>
</tbody>
</table>

7. How many Vitamin C tablets are in a bottle?

8. How many Vitamin A tablets are in a bottle?

9. How many calcium supplements are in a bottle?

10. How many multi-vitamins are in a bottle?

Solve. Use the work backward strategy. (Lesson 15–4)

11. David's dog needs a bath. If David uses a 5-gallon bucket to halfway fill a 60-gallon tub with water, how many gallons of water does he need to wash the dog?

   buckets of water

12. Winnie is helping her uncle build a deck. They have 20 pieces of 12-foot lumber. If they need 2 screws for every 3 feet of lumber, how many screws do they need?

   screws

Spiral Review

Solve. Use the work backward strategy. (Lesson 15–4)

11. David's dog needs a bath. If David uses a 5-gallon bucket to halfway fill a 60-gallon tub with water, how many gallons of water does he need to wash the dog?

   buckets of water

12. Winnie is helping her uncle build a deck. They have 20 pieces of 12-foot lumber. If they need 2 screws for every 3 feet of lumber, how many screws do they need?

   screws

Grade 3

A13

Chapter 15
Choose the Best Strategy

Justina is planting a row of shrubs in her backyard. She places shrubs 3 feet apart over a distance of 20 yards. She places the first shrub 3 feet from the edge of the yard. How many shrubs does Justina plant?

Step 1
Understand

Be sure you understand the problem.
Read carefully.

What facts do you know?
• The shrubs are spread over a distance of __20__ yards.
• Justina begins 3 feet from the edge of the yard and places shrubs __3__ feet apart.

What do you need to find?
• You need to find the number of feet in __20__ yards.
• You need to find how many __shrubs Justina plants__.

Step 2
Make a plan.
Choose a strategy.

To find the answer, you can draw a diagram. Find the number of feet in 20 yards. Show a distance that is that many feet long. Count by 3s to see how many shrubs Justina uses if they are placed 3 feet apart.

To find the answer, you can also write an equation. All the shrubs are the same distance apart. Use division to find how many shrubs Justina uses.

### 15–5

**Enrich**

**Three-Digit Tree Trivia**

Divide. Then match the quotients with the trees shown below. Then, order the trees from shortest to tallest. These are the tallest types of trees in North America.

- **Sugar Pine**: 1,089 ÷ 3 = __363__
- **Noble Fir**: 1,650 ÷ 6 = __275__
- **Sequoia**: 2,430 ÷ 9 = __270__
- **Douglas Fir**: 1,088 ÷ 4 = __272__
- **Redwood**: 1,645 ÷ 5 = __329__

From least to greatest: Douglas Fir 270 ft; Sugar Pine 272 ft; Noble Fir 275 ft; Redwood 329 ft; Sequoia 363 ft

About how many 6-foot-tall adults would need to stand on each other's shoulders to be as tall as the tallest tree? Show how you got your answer.

**about 60 to 61**

**possible answer: 363 ÷ 6 = 60.5**

### 15–6

**Reteach**

**Problem-Solving Investigation**

Justina is planting a row of shrubs in her backyard. She places shrubs 3 feet apart over a distance of 20 yards. She places the first shrub 3 feet from the edge of the yard. How many shrubs does Justina plant?

Step 1
Understand

Be sure you understand the problem.
Read carefully.

What facts do you know?
• The shrubs are spread over a distance of __20__ yards.
• Justina begins 3 feet from the edge of the yard and places shrubs __3__ feet apart.

What do you need to find?
• You need to find the number of feet in __20__ yards.
• You need to find how many __shrubs Justina plants__.

Step 2
Make a plan.
Choose a strategy.

To find the answer, you can draw a diagram. Find the number of feet in 20 yards. Show a distance that is that many feet long. Count by 3s to see how many shrubs Justina uses if they are placed 3 feet apart.

To find the answer, you can also write an equation. All the shrubs are the same distance apart. Use division to find how many shrubs Justina uses.
1. On Peapack's Park Day, volunteers work in the park. One volunteer has 6 boxes of plants. There are 12 plants in each box. If the volunteer puts the plants in rows of 9, how many rows can he make?

2. Peapack's town square is surrounded by 64 trees. The same number of trees are on each of the 4 sides. The trees on each side are divided into 2 equal rows. How many trees are in each row?

3. Bonnie takes a large photo. She makes a square frame for the photo. Each side of the frame is 27 inches long. How many inches around is the frame?

4. Some volunteers are building picnic tables. The tables can seat 4 adults or 6 children. How many adults can sit at 6 tables? How many children?

5. The benches at the park can seat a total of 95 people. Each bench can seat 5 people. How many benches are at the park?

6. The third-grade class makes a mural for the train station. The mural is 30 feet long. The mural is divided into 6 equal sections. How many feet long is each section?
**Homework Practice**

**Problem-Solving Investigation**

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

- Make an organized list
- Act it out
- Draw a picture
- Use logical reasoning
- Work backward

1. School starts at 8:45 A.M. Nick needs 30 minutes to get dressed and eat breakfast. It then takes him 35 minutes to get to school. What time does he have to wake up to be on time for school?

   **7:40 A.M.; work backward**

2. Melanie planted chives in her herb garden. After 2 weeks, they grew to 4 inches. The next day, they measured 5 and a half inches. The day after that, they measured 7 inches. If they continue growing at this rate, how tall were the chives the day after that?

   **8 and a half inches; draw a picture**

3. Pepe needs to put lightbulbs on the second floor of his house. Two of the bedrooms have ceiling lamps that need 3 bulbs each. The other bedroom has 2 lamps that each need 1 bulb. The 4 bulbs above the bathroom mirror also need to be replaced. How many bulbs does Pepe need in all?

   **12 bulbs; make a list**

**Spiral Review**

Divide. Check your answers. (Lesson 15–5)

1. 795 ÷ 3 = **265**
2. 672 ÷ 7 = **96**
3. 222 ÷ 6 = **37**
4. 272 ÷ 4 = **68**
5. 666 ÷ 9 = **74**
6. 408 ÷ 8 = **51**
7. 425 ÷ 5 = **85**
8. 477 ÷ 9 = **53**

**Answers (Lesson 15–6)**

**Enrich**

**Mystery Cafe**

Read and solve each problem to discover the prices of food items in the Mystery Café. When you discover the prices, write them on the lines next to the line items.

<table>
<thead>
<tr>
<th>Mystery Café Menu</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taco</td>
<td>$0.89</td>
</tr>
<tr>
<td>Cheeseburger</td>
<td>$1.09</td>
</tr>
<tr>
<td>Potato wedges</td>
<td>$1.05</td>
</tr>
<tr>
<td>Chicken strips</td>
<td>$3.30</td>
</tr>
<tr>
<td>Salad</td>
<td>$1.65</td>
</tr>
</tbody>
</table>

1. Justin bought 6 tacos. He spent $5.34. What is the price for each taco? **$0.89**
2. Blake and Glen bought 2 orders of potato wedges and 4 tacos. They spent $5.66. What is the price for each order of potato wedges? **$1.05**
3. Madeline is treating her friends to lunch for her birthday. She bought 8 cheeseburgers. She gave the cashier a $10.00 and got $1.28 in change. What is the price for each cheeseburger? **$1.09**
4. Victor ordered chicken strips and a salad. It cost him $4.95. The cost of the salad was \(\frac{1}{3}\) of the total cost. What is the price of a salad? What is the price of an order of chicken strips?
**Reteach**

**Divide Money**

To divide money amounts, divide the same way you divide whole numbers.

Find $9.56 ÷ 4.

**Step 1** Divide the dollars.

\[
\begin{array}{c|cc}
4 & \underline{9.56} & \\
-8 & & \\
\hline
1 & & \\
\end{array}
\]

Divide 9 ÷ 4.

**Step 2** Divide the dimes.

\[
\begin{array}{c|cc}
4 & \underline{9.56} & \\
-8 & & \\
\hline
15 & & \\
\end{array}
\]

Multiply 4 × 2.

**Step 3** Divide the pennies.

\[
\begin{array}{c|cc}
4 & \underline{9.56} & \\
-8 & & \\
\hline
15 & & \\
\end{array}
\]

Subtract 9 − 8.

**Step 4** Write the dollar sign and decimal point in the quotient.

\[
\begin{array}{c|cc}
4 & \underline{9.56} & \\
-8 & & \\
\hline
15 & & \\
\end{array}
\]

Separate the dollars and cents with a decimal point.

Check

\[
\begin{array}{c|cc}
2.39 & \underline{9.56} & \\
-8 & & \\
\hline
15 & & \\
\end{array}
\]

$2.39 \times 4$ The answer is correct.

$9.56$

Divide. Check your answer.

1. $4.50 ÷ 5 = \boxed{0.90}$

2. $8.32 ÷ 4 = \boxed{2.08}$

3. $3.50 ÷ 5 = \boxed{0.70}$

4. $9.27 ÷ 3 = \boxed{3.09}$

Find the unit cost.

5. 4 shirts for $20

$5$

6. 10 notebooks for $5

$0.50$

7. 3 cans of soup for $4.50

$1.50$

8. 4 bottles of water for $2

$0.50$

For Exercises 9–10 refer to the chart.

9. Amy bought 3 of one item and spent $21. What did she buy?

**Bag of Shells**

10. Jonathan bought 4 of one item and spent $12. What did he buy?

**Conch Shell**
Name __________________________ Date __________________

**Homework Practice**

**Divide Money**

Divide. Check your answer.

1. \( \$6.86 \div 7 = \) \$0.98
2. \( \$2.88 \div 9 = \) $0.32
3. \( \$7.48 \div 4 = \) $1.87
4. \( \$1.32 \div 6 = \) $0.22
5. \( \$9.36 \div 3 = \) $3.12
6. \( \$4.95 \div 5 = \) $0.99

Find the unit cost.

7. 8 jump ropes for $6.96 \( \frac{\$0.87}{\text{jump}} \)
8. 5 tropical fish for $7.95 \( \frac{\$1.59}{\text{fish}} \)
9. 6 organic apples for $7.44 \( \frac{\$1.24}{\text{apple}} \)
10. 4 beach balls for $9.68 \( \frac{\$2.42}{\text{ball}} \)

Use the hardware store’s price list for Exercises 11–13.

<table>
<thead>
<tr>
<th>Hardware Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rope</td>
<td>3 yards for $6.27</td>
</tr>
<tr>
<td>Chain</td>
<td>5 yards for $5.75</td>
</tr>
<tr>
<td>Twine</td>
<td>9 yards for $2.70</td>
</tr>
</tbody>
</table>

11. Which is cheapest per yard? **twine**
12. Jackie bought 10 yards of one kind of item and it cost \$11.50. What did she buy? **chain**
13. How many yards of rope did Hans buy if he spent \$18.81? **9 yards**

**Spiral Review**

Solve. Tell what strategy you used. (Lesson 15–6)

14. Payton visited a modern artist’s exhibit. The first painting was a circle divided into 2 sections. The second was a triangle divided into 4 sections, and the third was a square divided into 5 sections. What do you think the fourth painting looked like?

   a pentagon divided into 6 sections; sample answer: look for a pattern

15. A rowboat can carry 2 adults and 3 children across the lake. How many rowboats are needed to take 8 adults and 12 children across the lake?

   4 boats; sample answer: logical reasoning

---

**Problem-Solving Practice**

**Divide Money**

Solve.

1. Nate bought 2 hats for \$9.20. How much did each one cost?

   \( \frac{\$4.60}{\text{hat}} \)

2. How much does one bottle of water and one banana cost if 6 bottles of water cost \$6.12 and 5 bananas cost \$3.50?

   \( \$1.02 \text{ and } \$0.70 \)

3. Danielle and Maria have a total of \$4.50. How much will they each get if the money is split evenly?

   \( \frac{\$2.25}{\text{person}} \)

4. Matt’s dad spent \$6.50 on two games. How much did the games each cost if they both cost the same?

   \( \frac{\$3.25}{\text{game}} \)

5. Raffle tickets are \$2 each. Allison spent \$10 on them. How many raffle tickets did she buy?

   \( 5 \text{ tickets} \)

6. Sam paid \$7.40 for 4 coffee mugs. How much did each one cost?

   \( \frac{\$1.85}{\text{mug}} \)

7. James cuts grass in his neighborhood. He made \$6.58 in two days. If he earned the same amount each day, how much did he earn each day?

   \( \frac{\$3.29}{\text{day}} \)

8. Amy, Sarah, and Lindsay have a total of \$6.24. How much will each receive if they share the money equally?

   \( \frac{\$2.08}{\text{person}} \)
Name ___________________________ Date ___________________________

15–7 Enrich

The Fundraiser

1. Students are selling tickets to a fundraiser for $9 each. Kristi is keeping track of the money for the sale of the tickets. If she has $918, how many tickets have been sold so far?

102 tickets

2. The students set up booths with games and food. One of the booths sells darts to throw at balloons. The total cost for the balloons was $4.50. At 3 cents each, how many balloons did the students get for the booth?

150 balloons

3. At the "Dunk-the-Teacher" booth, students try to hit a target and dunk their teacher. They get to buy three tries for $1. So far, 180 tries have been made and the teacher has gone into the water 70 times. How much money has the booth raised so far?

$60.00

4. The students plan to keep $200 of the money they raise and divide up the rest equally to give to four charities. If the student raised $4,040, how much will each charity get?

$960

If they divide the money among 5 charities, how much will each get?

$768

5. Andrew is keeping track of the money for the whole fund raiser. Why is it important for him to know where the decimal goes when he is working with the money?

Sample answer: If he makes a mistake, no one will know for sure how much money they made.
### Oral Assessment (continued)

#### 1. Which walker walked the slowest?

<table>
<thead>
<tr>
<th>Name</th>
<th>Distance (miles)</th>
<th>Total Time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedro</td>
<td>5</td>
<td>159</td>
</tr>
<tr>
<td>Irene</td>
<td>2</td>
<td>44</td>
</tr>
<tr>
<td>Marta</td>
<td>6</td>
<td>200</td>
</tr>
<tr>
<td>Manuel</td>
<td>9</td>
<td>187</td>
</tr>
</tbody>
</table>

**Answer:** Pedro

**Reason:** I rounded 9 to 10, and 187 to 200, then divided.

#### 7. About how long did it take Irene to walk 1 mile?

**Answer:** about 20 minutes

**Reason:**

- Divided the total time by the distance.
- Irene walked 2 miles in 44 minutes.
- So, about 22 minutes per mile.

#### 8. Which walker walked the fastest?

**Answer:** Marta

**Reason:**

- Divided the total time by the distance.
- Marta walked 6 miles in 180 minutes.
- So, about 30 minutes per mile.

#### 9. Which walker walked the fastest?

**Answer:** Marta

**Reason:**

- Divided the total time by the distance.
- Marta walked 6 miles in 180 minutes.
- So, about 30 minutes per mile.

#### 10. About how long did it take Manuel to walk 1 mile?

**Answer:** about 20 minutes

**Reason:**

- Divided the total time by the distance.
- Manuel walked 9 miles in 187 minutes.
- So, about 20 minutes per mile.

#### 11. Tell how you got your answer.

**Answer:**

- Divided the total time by the distance.
- Manuel walked 9 miles in 187 minutes.
- So, about 20 minutes per mile.

#### 12. Which two walkers walked the closest distance?

**Answer:** Pedro and Marta

**Reason:**

- Pedro walked 5 miles.
- Marta walked 6 miles.
- So, they are closest.

### Oral Assessment (continued)

#### Create a flyer that is similar to an ad for a grocery store. Put the following information on the flyer: (1) canned fruit, 5 for $3; (2) white rice, 2 for $3; and (3) yogurt, 6 for $3.

**Flyer:**

1. **Canned Fruit:** 5 for $3
2. **White Rice:** 2 for $3
3. **Yogurt:** 6 for $3

**Show the flyer to the student, then read each question aloud to the student. Write the student's answers on the lines provided.**

#### 1. What is the unit cost for a can of fruit?

**Answer:** $0.60 per can

**Reason:**

- Divided the price by the number of items.
- $3 divided by 5 equals $0.60.

#### 2. What is the unit cost for a box of rice?

**Answer:** $1.50 per box

**Reason:**

- Divided the price by the number of items.
- $3 divided by 2 equals $1.50.

#### 3. What is the unit cost for a container of yogurt?

**Answer:** $0.50 per container

**Reason:**

- Divided the price by the number of items.
- $3 divided by 6 equals $0.50.

#### 4. Tell how you got your answer.

**Answer:**

- Divided the price by the number of items.
- $3 divided by 5 equals $0.60.
- $3 divided by 2 equals $1.50.
- $3 divided by 6 equals $0.50.

#### 5. How much would it cost if someone wanted to buy 2 containers of yogurt and 1 box of white rice?

**Answer:** $2.50

**Reason:**

- Divided the price for yogurt by 2 and rice by 1, then added.
- $0.50 per container of yogurt, multiplied the price by the number of items, then added $1.50.

### Oral Assessment (continued)

#### 6. Explain your answer.

**Answer:**

- Divided the price for yogurt by 2 and rice by 1, then added.
- $0.50 per container of yogurt, multiplied the price by the number of items, then added $1.50.
# Chapter 15 Assessment Answer Key

## Diagnostic Test
Page 44

1. 6
2. 8
3. 6
4. 9
5. \(12 \div 4 = 3\)
6. \(20 \div 5 = 4\)
7. 30
8. 40
9. 90
10. 60
11. 600
12. 300
13. 800
14. 500
15. 51
16. 35
17. 64
18. 22

## Chapter Pretest
Page 45

1. 80
2. 900
3. 16
4. 110
5. 400
6. 33
7. \(\text{about 40}\)
8. \(\text{about 70}\)
9. \(\text{about 200}\)
10. \(\text{about 2,000}\)
11. \(\text{about 200}\)
12. \(\text{about 700}\)
13. \(\text{about 6,000}\)
14. \(\text{about 7,000}\)
15. \(\text{about 1,100}\)
16. \(\text{about 3,600}\)

## Quiz 1 (15–1 through 15–2)
Page 46

1. \(2, 20, 200, 2,000\)
2. \(4, 40, 400, 4,000\)
3. 50
4. 80
5. \(2,000\)
6. 60
7. 200
8. 200
9. 40
10. 30
### Quiz 2 (15–3 through 15–4)
**Page 47**

1. 11
2. 16
3. 16
4. 80
5. 60

6. 1.5 hours
7. 6 pages
8. 10 baseball cards
9. 18 strawberries
10. yes

### Quiz 3 (15–5 through 15–7)
**Page 48**

1. 54
2. 47
3. 32

4. 3:55 P.M.
5. 50 buttons

6. $1.10
7. $1.04
8. $1.02
9. $2.07
10. $1.58

### Mid-Chapter Review
(15–1 through 15–3)
**Page 49**

1. 8, 80, 800
2. 6, 60, 600

3. 70
4. 150
5. 500
6. 5,000

7. 90
8. 300
9. 30
10. 21 slices
### Chapter 15 Assessment Answer Key

#### Chapter Test, Form 1
Page 55

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>B</td>
</tr>
<tr>
<td>2.</td>
<td>J</td>
</tr>
<tr>
<td>3.</td>
<td>C</td>
</tr>
<tr>
<td>4.</td>
<td>F</td>
</tr>
<tr>
<td>5.</td>
<td>C</td>
</tr>
<tr>
<td>6.</td>
<td>H</td>
</tr>
<tr>
<td>7.</td>
<td>C</td>
</tr>
<tr>
<td>8.</td>
<td>F</td>
</tr>
<tr>
<td>9.</td>
<td>C</td>
</tr>
<tr>
<td>10.</td>
<td>G</td>
</tr>
<tr>
<td>11.</td>
<td>D</td>
</tr>
<tr>
<td>12.</td>
<td>J</td>
</tr>
<tr>
<td>13.</td>
<td>B</td>
</tr>
<tr>
<td>14.</td>
<td>H</td>
</tr>
<tr>
<td>15.</td>
<td>B</td>
</tr>
</tbody>
</table>

#### Chapter Test, Form 2A
Page 57

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>B</td>
</tr>
<tr>
<td>2.</td>
<td>G</td>
</tr>
<tr>
<td>3.</td>
<td>D</td>
</tr>
<tr>
<td>4.</td>
<td>G</td>
</tr>
<tr>
<td>5.</td>
<td>C</td>
</tr>
<tr>
<td>6.</td>
<td>J</td>
</tr>
<tr>
<td>7.</td>
<td>C</td>
</tr>
<tr>
<td>8.</td>
<td>F</td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
</tr>
</tbody>
</table>

(continued on the next page)
Chapter 15 Assessment Answer Key

Chapter Test, Form 2A
Page 58

9. C
10. G
11. A
12. J
13. B
14. H
15. B

Chapter Test, Form 2B
Page 59

Page 60

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

Copyright © Macmillan/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.
## Chapter 15 Assessment Answer Key

### Chapter Test, Form 2C

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>700</td>
</tr>
<tr>
<td>3.</td>
<td>80</td>
</tr>
<tr>
<td>4.</td>
<td>19</td>
</tr>
<tr>
<td>5.</td>
<td>11</td>
</tr>
<tr>
<td>6.</td>
<td>58</td>
</tr>
</tbody>
</table>

### Chapter Test, Form 2D

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>80</td>
</tr>
<tr>
<td>2.</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>74</td>
</tr>
<tr>
<td>4.</td>
<td>11</td>
</tr>
<tr>
<td>5.</td>
<td>19</td>
</tr>
<tr>
<td>6.</td>
<td>700</td>
</tr>
</tbody>
</table>

### Page 63

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>70</td>
</tr>
<tr>
<td>8.</td>
<td>50</td>
</tr>
<tr>
<td>9.</td>
<td>500</td>
</tr>
<tr>
<td>10.</td>
<td>$0.78</td>
</tr>
<tr>
<td>11.</td>
<td>$1.21</td>
</tr>
<tr>
<td>12.</td>
<td>$3.79</td>
</tr>
</tbody>
</table>

(continued on the next page)
<table>
<thead>
<tr>
<th>Chapter Test, Form 2D</th>
<th>Chapter Test, Form 3</th>
<th>Page 66</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. 6</td>
<td>13. 185 pages</td>
<td></td>
</tr>
<tr>
<td>14. &lt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. 38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 800</td>
<td>1. 800</td>
<td></td>
</tr>
<tr>
<td>2. 1,200</td>
<td>2. 1,200</td>
<td></td>
</tr>
<tr>
<td>3. 24</td>
<td>3. 24</td>
<td></td>
</tr>
<tr>
<td>4. 111</td>
<td>4. 111</td>
<td></td>
</tr>
<tr>
<td>5. 34</td>
<td>5. 34</td>
<td></td>
</tr>
<tr>
<td>6. 37</td>
<td>6. 37</td>
<td></td>
</tr>
<tr>
<td>7. 90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. 80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. 2,000</td>
<td>paperbacks, hardbacks, T-shirts</td>
<td></td>
</tr>
<tr>
<td>10. $0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. $2.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. $295.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. 185 pages</td>
<td>14.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>15. 8 dolls</td>
<td></td>
</tr>
<tr>
<td>15. 8 dolls</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Chapter 15 Assessment Answer Key

Page 67, 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>
Chapter 15 Assessment Answer Key
Page 67, Extended-Response Test
Sample Answers

In addition to the scoring rubric found on page A27, the following sample answers may be used as guidance in evaluating open-ended assessment items.

1. To use basic facts and patterns of zeros to divide multiples of 10, 100, and 1,000, follow three steps. For example, find $1,600 \div 4$. Step 1: Drop the zeros to get $16 \div 4$. Step 2: Divide $6 \div 4 = 4$. Step 3: Add the zeros back, so $1,600 \div 4 = 400$.

2. To estimate a quotient by rounding, round the number to the nearest ten or hundred that has a basic fact you can use. Then use the pattern of zeros to divide. For example, to estimate $631 \div 7$, round down to 630. Drop the zero to get $63 \div 7$. Divide using the basic fact that $63 \div 7 = 9$. Then add the zero back, so $630 \div 7 = 90$.

3. a. Estimate $345 \div 5$ by rounding 345 up to 350. Divide $350 \div 5 = 70$. So, the turtle can walk about 70 feet per minute.

   b. To find $345 \div 5$, divide the hundreds. Since $3 < 5$, there are not enough hundreds to divide, so divide $34 \div 5$. Bring down the ones to divide $45 \div 5$, so $345 \div 5 = 69$. So, the turtle can walk 69 feet per minute.

   Check: $69 \times 5 = 345$. The product is the same as the dividend, so $345 \div 5 = 69$, and 69 is close to the estimate of 70.

4. a. Divide the cost per bag by the number of pounds in the bag: $4.95 \div 5 = $0.99. The unit cost for one pound of potatoes is $0.99.

   b. Divide the cost per box by the number of cans in a box: $9.99 \div 9 = $1.11. The unit cost for one can of salmon is $1.11.

   c. Divide the cost per carton by the number of boxes per carton: $24.60 \div 4 = $6.15. The unit cost for one box of risotto is $6.15.

   d. Multiply the quantity of each item by its unit cost, then add the products: $(3 \times $1.11) + (2 \times $6.15) + (10 \times $0.99) = $3.33 + $12.30 + $9.90 = $25.53. It would cost $25.53 to buy 3 cans of salmon, 2 boxes of risotto, and 10 pounds of red potatoes.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>B</td>
</tr>
<tr>
<td>2.</td>
<td>J</td>
</tr>
<tr>
<td>3.</td>
<td>A</td>
</tr>
<tr>
<td>4.</td>
<td>J</td>
</tr>
<tr>
<td>5.</td>
<td>C</td>
</tr>
<tr>
<td>6.</td>
<td>F</td>
</tr>
<tr>
<td>7.</td>
<td>C</td>
</tr>
<tr>
<td>8.</td>
<td>160</td>
</tr>
<tr>
<td>9.</td>
<td>47</td>
</tr>
<tr>
<td>10.</td>
<td>79</td>
</tr>
<tr>
<td>11.</td>
<td>22</td>
</tr>
<tr>
<td>12.</td>
<td>$5 \times 4$</td>
</tr>
<tr>
<td>13.</td>
<td>quadrilateral</td>
</tr>
<tr>
<td>14.</td>
<td>4</td>
</tr>
</tbody>
</table>
# Chapter 15 Assessment Answer Key

## End-of-Year Test

<table>
<thead>
<tr>
<th>Page 72</th>
<th>Page 73</th>
<th>Page 74</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>61,810</strong></td>
<td>15. <strong>90</strong></td>
<td>27. <strong>120 in.</strong></td>
</tr>
<tr>
<td>2. <strong>4,100</strong></td>
<td>16. <strong>$42</strong></td>
<td></td>
</tr>
<tr>
<td>3. <strong>8,400</strong></td>
<td>17. <strong>20</strong></td>
<td></td>
</tr>
<tr>
<td>4. <strong>&lt;</strong></td>
<td>18. <strong>5</strong></td>
<td><strong>isosceles</strong></td>
</tr>
<tr>
<td>5. <strong>&lt;</strong></td>
<td>19. <strong>9</strong></td>
<td></td>
</tr>
<tr>
<td>6. <strong>&lt;</strong></td>
<td></td>
<td><strong>parallelogram</strong></td>
</tr>
<tr>
<td>7. <strong>&lt;</strong></td>
<td></td>
<td><strong>29.</strong></td>
</tr>
<tr>
<td>8. <strong>=</strong></td>
<td>20. <strong>4 hats for $20</strong></td>
<td></td>
</tr>
<tr>
<td>9. <strong>6,575</strong></td>
<td>21. <strong>×</strong></td>
<td></td>
</tr>
<tr>
<td>10. <strong>8</strong></td>
<td>22. <strong>$7</strong></td>
<td></td>
</tr>
<tr>
<td>11. <strong>10</strong></td>
<td>23. <strong>300</strong></td>
<td></td>
</tr>
<tr>
<td>12. <strong>$9.34</strong></td>
<td>24. <strong>4</strong></td>
<td></td>
</tr>
<tr>
<td>13. <strong>6,739</strong></td>
<td>25. <strong>7,000</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 14. **57** | 26. **inches** | (continued on the next page)
30. pineapple

31. more

32. likely

33. \( \frac{5}{13} \)

34. \( \frac{10}{7} \)
35. \( \frac{10}{10} \)
36. 0.58

37. \( \frac{1}{2} \)

38. $102.24
39. 168
40. 29 yd