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Focused Mathematics Intervention— Level 5

This sample includes the following:

Teacher's Guide Cover (1 page)

Teacher's Guide Table of Contents (1 page)

How to Use This Product (3 pages)

Lesson Plan (17 pages)

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Level 5

Focused Mathematics Intervention

Teacher's Guide

Teacher Created Materials
PUBLISHING

Table of Contents

Welcome

Program Welcome	4
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Research

Research on Mathematics Intervention	6
The Need for Intervention	7
Response to Intervention in Mathematics	8
Components of Effective Mathematics Interventions	10
High-Yield Strategies for Increasing Student Achievement	12
Using Technology to Improve Mathematical Learning	13
Using Games to Motivate Struggling Math Learners	14
Assessment	15

Best Practices

Components of Effective Mathematics Intervention Programs	17
Differentiation	19
Differentiating by Specific Needs	19
Developing Academic Vocabulary	21
Academic Vocabulary	21
Developing Math Skills Using Concrete Models	22
Developing Mathematical Problem-Solving Skills	24
Why We Teach Problem Solving	24
Making Connections	24
A Problem-Solving Framework	25
Math in the Real World	28
Developing Math Fluency Skills	29

How to Use This Product

Kit Components	31
Getting Started	32
Teaching a Lesson	33
Using the Math Fluency Games	35
How to Organize and Manage Games	35
Playing the Math Fluency Game Sets	36
Playing the Digital Math Fluency Games	39
Using the Technology Options	40

Planning for Intervention

Pacing Plans	41
Correlations	45
Introduction to Correlations	45
Standards Correlations	46
Series Scope and Sequence	49

Lessons

Lesson 1: Using Parentheses, Brackets, and Braces	61
Lesson 2: Working with Expressions	69

Lesson 3: Understanding Place Value Relationships	77
Lesson 4: Multiplying and Dividing by Powers of 10	85
Lesson 5: Comparing Decimals to the Thousandths	93
Lesson 6: Rounding Decimals	101
Lesson 7: Multiplying Using the Standard Algorithm	109
Lesson 8: Dividing Multi-Digit Numbers	117
Lesson 9: Adding and Subtracting Decimals	125
Lesson 10: Multiplying Decimals	133
Lesson 11: Dividing Decimals	141
Lesson 12: Solving Decimal Word Problems	149
Lesson 13: Adding Fractions (Unlike Denominators)	157
Lesson 14: Subtracting Fractions (Unlike Denominators)	165
Lesson 15: Adding and Subtracting Fractions (Unlike Denominators)	173
Lesson 16: Adding Mixed Numbers	181
Lesson 17: Subtracting Mixed Numbers	189
Lesson 18: Solving Word Problems by Adding/Subtracting Fractions	197
Lesson 19: Interpreting Fractions as Division	205
Lesson 20: Multiplying Fractions	213
Lesson 21: Multiplying Mixed Numbers Using Area Models	221
Lesson 22: Solving Word Problems by Multiplying Fractions	229
Lesson 23: Dividing Fractions, Part I	237
Lesson 24: Dividing Fractions, Part II	245
Lesson 25: Solving Word Problems by Dividing Fractions	253
Lesson 26: Converting Measurement Units	261
Lesson 27: Finding Volume	269
Lesson 28: Finding the Volume of Solid Figures Using a Formula	277
Lesson 29: Locating and Plotting on a Coordinate Plane	285
Lesson 30: Problem Solving with Coordinate Planes	293

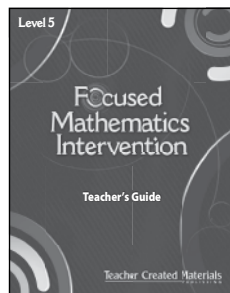
Appendices

Appendix A: References Cited	301
Appendix B: Teacher Glossary	304
Appendix C: Digital Resources Charts	308

Kit Components

Teacher's Guide

30 easy-to-use, standards-based lesson plans



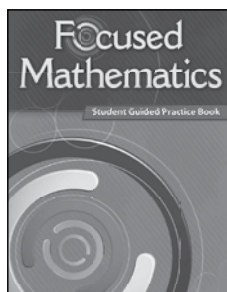
3 Digital Math Fluency Games

Focus on mathematical skills and strategies, and are on the Digital Resources USB Device



Student Guided Practice Book

Full-color student activities

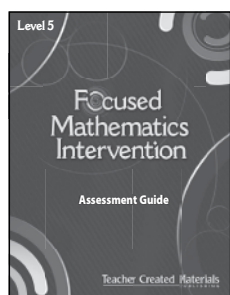


Digital Resources

- PDFs of all student materials, game sets, activity sheets, assessments, etc.
- PDFs of teacher resources
- Digital Math Fluency Games
- Electronic versions of the Pretest, Posttest, Performance Tasks, and reporting tools

Assessment Guide

Includes a pretest, posttest, performance tasks with assessments, and the answer key for the *Student Guided Practice Book*



Refocus Mini Lesson

Provide as PowerPoint® and PDF files



3 Math Fluency Game Sets

Include a game board, directions, an answer key, and game pieces

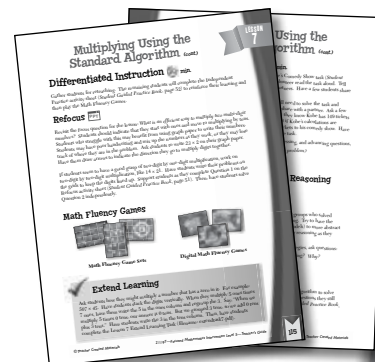
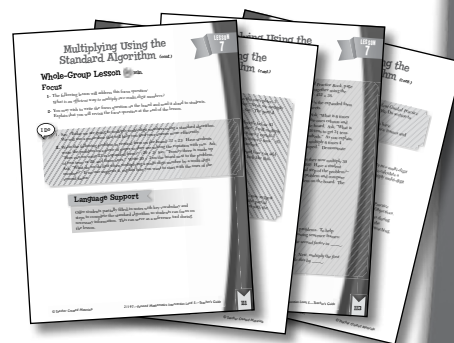
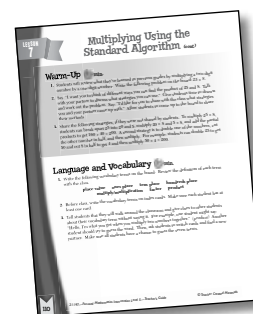
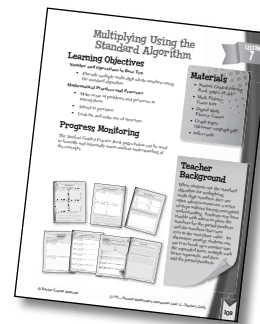


Teaching a Lesson

Teacher's Guide

Each 8-page lesson is organized in a consistent format for ease of use. Teachers may choose to complete some or all of the lesson activities to best meet the needs of their students. Lesson materials can be utilized flexibly in a variety of settings. For example, modeling with a small group, using printed materials with a document camera, or using PDF materials on a digital platform, such as an interactive whiteboard. Each lesson includes:

- an overview page with key information for planning
- key mathematics content standards covered
- key mathematical practices and processes addressed
- an overview providing teacher background or student misconceptions
- a Warm-Up activity to build students' recall of important mathematical concepts
- a whole-class Language and Vocabulary activity
- time markers to indicate the approximate time for instruction
- a whole-class section focusing on the key concept/skill being taught
- use of the gradual release of responsibility model in the Whole-Group lesson section
- differentiation strategies to support and extend learning with the Refocus lesson and Extend Learning activity
- math fluency games that motivate students to develop and reinforce mastery of basic skills
- a Math in the Real World concept task activity



Teaching a Lesson *(cont.)*

Student Guided Practice Book

Each lesson in the *Teacher's Guide* has seven corresponding student pages in the *Student Guided Practice Book*:

- a We Do activity to support the gradual release of responsibility model
- a You Do activity to facilitate independent practice
- a Quick Check to easily monitor students' progress
- a Refocus activity for students who need more instruction
- an Independent Practice page to reinforce mathematical content taught in the lesson
- a Math in the Real World concept task for students to apply the math concept in a real-life scenario
- a Reflection page for students to share their mathematical understanding



Rounding Decimals

Learning Objectives

Number and Operations in Base Ten

- Use place value understanding to round decimals to any place.

Mathematical Practices and Processes

- Model with mathematics.
- Attend to precision.
- Look for and make use of structure.

Progress Monitoring

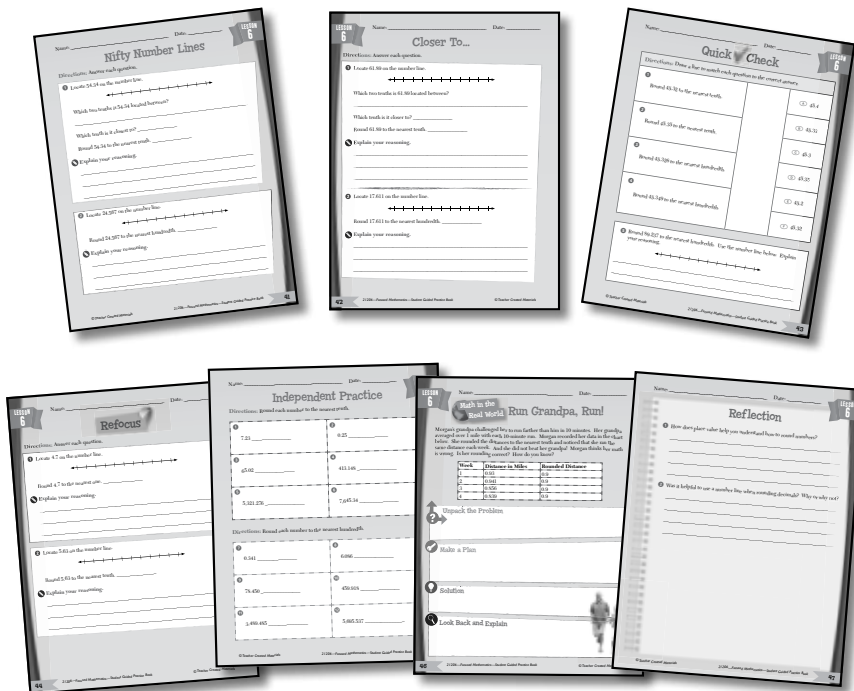
The *Student Guided Practice Book* pages below can be used to formally and informally assess student understanding of the concepts.

Materials

- *Student Guided Practice Book* (pages 41–47)
- Math Fluency Game Sets
- Digital Math Fluency Games
- index cards
- chart paper
- markers
- unlined paper

Student Misconceptions

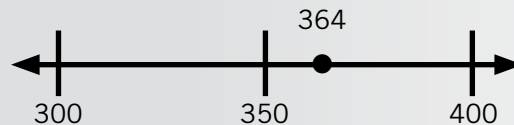
Students may misapply the rule for “rounding up” by rounding the designated place value up but leaving the remaining digits as they are. For example, when rounding the number 13,567 to the nearest thousand, students may write 14,567 instead of 14,000. To be successful with rounding decimal numbers, students need a strong understanding of place value. A number line provides an effective visual model for students to understand place value and rounding.



Rounding Decimals *(cont.)*

Warm-Up (10) min.

1. Write *tens*, *hundreds*, and *thousands* on index cards. Shuffle the cards and place them facedown on the table. Write the following on the board: *Round the number to the nearest _____*. Also, write a three-digit number (such as 364), and then move on to a four-digit number (such as 5,689) on the board.
2. To remind students how to round numbers to a designated place value, demonstrate using a number line. For example, when rounding 364 to the nearest hundred, students should know that they can either round 364 down to 300 or up to 400. Since 364 is greater than 350, the number is rounded up to 400. The number line should look like this:



3. Have a student volunteer select the top card and complete the sentence on the board with the word on the card. Have the class round the number on the board to the specified place. Ask students to write the rounded number on a sheet of paper. Have students hold up their papers. Scan the answers. Write a new three- or four-digit number on the board and continue play.

Language and Vocabulary (10) min.

1. Write the following vocabulary terms on the board. Review the definition of each term with the class.

tenths hundredths thousandths round estimate

2. Ask students why it is important to know how to round numbers. Students should understand that knowing how to round numbers will help them estimate. For example, when shopping at the grocery store, you might need to estimate your total cost before walking up to the cashier. Rounding the cost of each item to the nearest dollar will help to get an estimate of the total cost. For example, if the cost of a loaf of bread is \$1.89, a good estimate would be to round the cost up to \$2.00 since \$1.89 is closer to \$2.00 than \$1.00.
3. Write the decimal 0.568 on chart paper. Have students copy the decimal on a sheet of paper. Say, “Label each place on the decimal with the following words: *tenths*, *hundredths*, and *thousandths*.” Allow students time to label their number. Then, ask student volunteers to label the decimal on the chart paper.
4. After students have finished, write *round* on the chart paper and circle it. Ask, “Are there other words that mean the same thing as *round*?” As students provide answers, draw an idea web with synonyms of the word *round*. Examples may include: *estimate*, *approximation*.

Rounding Decimals *(cont.)*

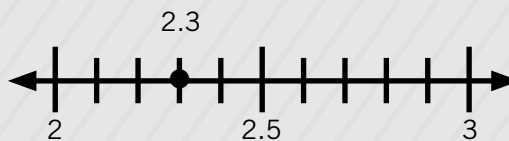
Whole-Group Lesson (40) min.

Focus

1. The following lesson will address this focus question:
How do you use place value to round decimals?
2. You may wish to write the focus question on the board and read it aloud to students. Explain that you will revisit the focus question at the end of the lesson.

I Do

1. Say, "Today we are going to round decimals to the tenths place and hundredths place." Write the following decimal on the board: 2.3.
2. Ask, "What can you tell me about this number?" Students should indicate it is a number that includes a whole number and a part of a whole (decimal). They should note that it extends to the tenths place. Students might discuss what digits are in each place. (*The 2 is in the ones place; 3 is in the tenths place.*) Guide students to discuss the value of the number. (*The number is more than 2 but less than 3.*)
3. Ask, "If I want to place this decimal on the number line, what two whole numbers should it be between?" (*2 and 3*) "How many tenths are between 2 and 3?" (*10*)
4. Draw a number line on the board. Distribute a sheet of paper to each student. Have them make their own number line as you create yours. Ask, "How can I determine where this number goes on the number line?" (*It will be greater than 2 but less than 3.*) Ask, "How do I know exactly where it goes?" (*Look at the tenths place.*) Make 10 equal parts between 2 and 3. Say, "We need to place this dot on 2 and three tenths." Place a dot to show 2.3 on the number line.

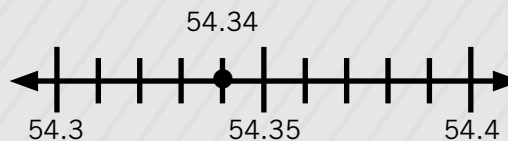


Rounding Decimals *(cont.)*

Whole-Group Lesson *(cont.)*

We Do

1. Refer students to the Nifty Number Lines activity sheet (*Student Guided Practice Book*, page 41). Say, “Let’s round some more decimals using number lines.” Have a student volunteer read Question 1: *Locate 54.34 on the number line.*
2. Say, “When we round 54.34 to the nearest tenth, it falls between 54.3 and 54.4.” Ask, “Which is it closer to?” Say, “Our number is greater than 54.3 but less than the next tenth, 54.4. How can we locate 54.34?” Draw a number line to locate 54.34. If no one suggests it, demonstrate drawing lines to represent hundredths between three tenths and four tenths. Have a student draw a dot to show 54.34. The number line should look like this:



3. Have students work with a partner to explain their reasoning for Question 1. When they have finished, have students volunteer their answers aloud. Students should indicate that 54.34 is closer to 54.3 than 54.4. Ask, “What is 54.34 rounded to the nearest tenth?” (54.3)
4. To help students explain their reasoning, provide them with the following sentence frames:
 - *Since I wanted to round to the _____ place, I found the two _____ the number was between.*
 - *I found the exact location of the number on a number line to determine which _____ it was closest to.*
5. Continue working with students on Question 2. Students will be rounding to the nearest hundredth. Guide students to think about what hundredth 24.567 is closest to using a number line. Then, students will explain their reasoning.

Rounding Decimals (cont.)

Whole-Group Lesson (cont.)

You Do

1. Refer students to the Closer To... activity sheet (*Student Guided Practice Book*, page 42). Provide the sentence frames from Step 4 of the We Do section to help students explain their reasoning.
2. Have students share their number lines and reasoning. If students have difficulty explaining their reasoning, remind them to use the sentence frames and vocabulary terms.

Closing the Whole-Group Lesson

Revisit the focus question for the lesson: *How do you use place value to round decimals?* Discuss how understanding place value added to students' understanding of rounding decimal numbers. Ask students to explain how they would round a decimal number to the nearest tenth and to the nearest hundredth. Ask students how using a number line helped them round decimals. Students should recognize that plotting a decimal number on a number line helps them see the decimal in relation to other numbers.

Progress Monitoring (5) min.

1. Have students complete the Quick Check activity sheet (*Student Guided Practice Book*, page 43) to gauge student progress toward mastery of the Learning Objectives.
2. Based on the results of the Quick Check activity sheet and your observations during the lesson, identify students who may benefit from additional instruction in the Learning Objectives. These students will be placed into a small group for reteaching. See instructions on the following page.

Rounding Decimals *(cont.)*

Differentiated Instruction 20 min.

Gather students for reteaching. The remaining students will complete the Independent Practice activity sheet (*Student Guided Practice Book*, page 45) to reinforce their learning and then play the Math Fluency Games.

Refocus

Revisit the focus question for the lesson: *How do you use place value to round decimals?* Have students draw a number line on a sheet of paper. Write 6.7 on the board. Ask, “What do we know about this number?” Students should recognize that it is a number made up of a whole number and a decimal. Ask, “What two whole numbers does 6.7 fall between?” (*between 6 and 7*)

Draw a number line on the board. Label each end of the number line with the whole numbers 6 and 7, and make tick marks between the numbers so that there are 10 equal parts. Say, “Each of the lines between 6 and 7 represents a tenth.” Point to each line as you count, “One tenth, two tenths, three tenths, etc.” Label the benchmark decimal 6.5 in the middle of 6 and 7. Ask, “How many tenths are in 6.7? Where is it located on the number line?” (*seven tenths, between 6 and 7*) Have students plot the number. Say, “If I were to round this number to the nearest whole number, is it closer to 6 or 7?” (*7*) Say, “We know 6.7 is closer to 7 because seven tenths is closer to 7 than 6. You can use the benchmark decimal 6.5 to help you.”

Support students as they complete Question 1 on the Refocus activity sheet (*Student Guided Practice Book*, page 44). Then, have students solve Question 2 independently.

Math Fluency Games



Math Fluency Game Sets



Digital Math Fluency Games

Extend Learning

Ask students how they might round numbers without the use of a number line. Write 4.68 on the board. Say, “Round this number to the nearest tenth.” Students should explain that the number is between 4.6 and 4.7. Have students complete the Lesson 6 Extend Learning Task (filename: extendtask6.pdf).

Rounding Decimals *(cont.)*

Math in the Real World (30) min.

1. Refer students to the Math in the Real World: Run Grandpa, Run! task (*Student Guided Practice Book*, page 46). Have a student volunteer read the task aloud. Tell students to explain or summarize the task to their partners. Have a few students share their summaries.
2. Ask students to think about what information they will need to solve the task and what the task is asking them to do. Then, have them share with a partner. Ask a few students to share aloud. Students should identify that they know the distance in miles that Morgan ran each week. They need to find out if she rounded to the nearest tenth correctly. Have students work in groups of two or three to complete the task.
3. As students are working, circulate and ask focusing, assessing, and advancing questions:
 - *What is the purpose of rounding a number?*
 - *Did Morgan round each number correctly?*
 - *What does her rounding mean?*

Sentence Frames for Explaining Reasoning

- *To round to the nearest tenth, Morgan needs to _____.*
 - *Morgan's rounding is/is not correct because _____.*
 - *When she rounded, she found out _____. Instead, she could _____.*
4. Observe how students are solving the task, and choose a few groups who solved the task in different ways to share their solutions and reasoning. Try to have the solutions move from concrete representations (number lines) to more abstract representations (place value chart). Make sure students explain their reasoning as they share solutions.
 5. As groups are sharing their solution paths, reasoning, and strategies, ask questions:
 - *Do you agree or disagree with the solution path and reasoning? Why?*
 - *Who can restate _____'s strategy/solution path/reasoning?*
 - *Which solution path makes the most sense to you? Why?*

Lesson Reflection (5) min.

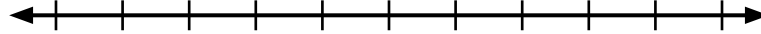
Have students summarize their learning about using place value to round decimals, and provide feedback on any questions they still have about the content on the Reflection activity sheet (*Student Guided Practice Book*, page 47).

Name: _____ Date: _____

Nifty Number Lines

Directions: Answer each question.

- 1 Locate 54.34 on the number line.



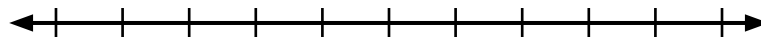
Which two tenths is 54.34 located between?

Which tenth is it closest to? _____

Round 54.34 to the nearest tenth. _____

-  Explain your reasoning.

- 2 Locate 24.567 on the number line.



Round 24.567 to the nearest hundredth. _____

-  Explain your reasoning.

Closer To...

Directions: Answer each question.

- 1 Locate 61.89 on the number line.



Which two tenths is 61.89 located between?

Which tenth is it closer to? _____

Round 61.89 to the nearest tenth. _____

-  Explain your reasoning.

- 2 Locate 17.611 on the number line.



Round 17.611 to the nearest hundredth. _____

-  Explain your reasoning.

Quick Check

Directions: Draw a line to match each question to the correct answer.

1

Round 45.32 to the nearest tenth.

Ⓐ 45.4

2

Round 45.35 to the nearest tenth.

Ⓑ 45.33

3

Round 45.326 to the nearest hundredth.

Ⓒ 45.3

Ⓓ 45.35

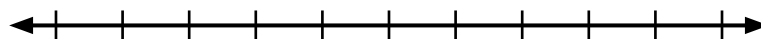
4

Round 45.349 to the nearest hundredth.

Ⓔ 45.2

Ⓕ 45.32

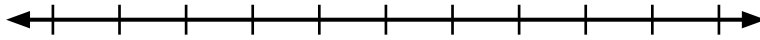
- 5 Round 89.237 to the nearest hundredth. Use the number line below. Explain your reasoning.



Refocus

Directions: Answer each question.

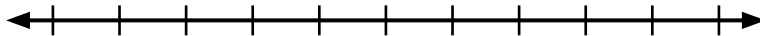
- 1 Locate 4.7 on the number line.



Round 4.7 to the nearest one. _____

-  Explain your reasoning.

- 2 Locate 5.63 on the number line.



Round 5.63 to the nearest tenth. _____

-  Explain your reasoning.

Name: _____ Date: _____

Independent Practice

Directions: Round each number to the nearest tenth.

1 7.23 _____	2 0.25 _____
3 65.02 _____	4 413.148 _____
5 5,321.276 _____	6 7,645.34 _____

Directions: Round each number to the nearest hundredth.

7 0.341 _____	8 6.086 _____
9 78.450 _____	10 459.918 _____
11 3,489.485 _____	12 5,695.537 _____



Run Grandpa, Run!

Morgan's grandpa challenged her to run farther than him in 10 minutes. Her grandpa averaged over 1 mile with each 10-minute run. Morgan recorded her data in the chart below. She rounded the distances to the nearest tenth and noticed that she ran the same distance each week. And she did not beat her grandpa! Morgan thinks her math is wrong. Is her rounding correct? How do you know?

Week	Distance in Miles	Rounded Distance
1	0.93	0.9
2	0.941	0.9
3	0.856	0.9
4	0.839	0.9



Unpack the Problem



Make a Plan



Solution



Look Back and Explain



Reflection

- 1 How does place value help you understand how to round numbers?

- 2 Was it helpful to use a number line when rounding decimals? Why or why not?

Pretest

1. Solve the following expression:
 $\{[(12 + 8) - (4 \div 2)] \times 6\}$.

(A) 48
 (B) 60
 (C) 72
 (D) 108

3. What number is $\frac{1}{10}$ of 4?

(A) 0.04
 (B) 0.4
 (C) 40
 (D) 400

2. Scott wrote the following expression:
 $24 - (6 \times 2.5)$. What is the value of his expression?

(A) 3.5
 (B) 9
 (C) 18.6
 (D) 45

4. What is 7×10^4 ?

(A) 700
 (B) 7,000
 (C) 70,000
 (D) 700,000

Performance Task 1: Book Fair

Part A

Today is Library Day at Belleview School. Mrs. Webb and her fifth-grade students are helping Ms. Tan, the school librarian, prepare for the canned food drive.

1. Ms. Tan has to rearrange bookshelves to make room for the canned food drive. Ms. Tan needs to know how many books are on the shelves. Cory and Albert volunteer to count the books in a double-sided bookcase and make a chart.

Shelf Number	Books (Side 1)	Books (Side 2)
1	11	17
2	11	17
3	11	17
4	11	17
5	11	17

- A. Cory says that she knows there are 140 books on the first five shelves of the bookcase. She explains, “I added 11 and 17, and then I multiplied by 5.” Is Cory correct? Explain your thinking.

- B. Albert says, “I got the same number. First, I wrote the number sentence $5 \times (11 + 17)$, and then I found the solution.” Is Albert correct? How do you know?

2. Cory and Albert have found different-sized crates of old library cards. Ms. Tan wants to package the cards in small boxes with other cards. Use the following number sentence to find the number of packages Ms. Tan will need: $[15 + 5(500 - 400) + 25]$. Explain the steps you took to find the solution.
