

Add Whole Numbers

KEY CONCEPTS

Mathematics Objective Add 3-digit numbers using place-value concepts and the standard algorithm.

Language Objective Describe, orally, the thought process when completing the standard algorithm for addition, including the reasoning behind performing each step and how place-value concepts are related.

Essential Understanding There is more than one way to add and subtract multi-digit whole numbers. The standard algorithms for addition and subtraction both use place value, starting with the ones, then the tens, and so on. Regrouping is done when needed.

COHERENCE

Look Back Previously, students learned place-value relationships.

This Lesson Students use place value and addition algorithms, such as the standard algorithm, to add 3-digit numbers.

Look Ahead Later, students will use their knowledge of place value and the standard algorithm to subtract 3-digit numbers.

BALANCE

Conceptual Understanding Students generalize an addition algorithm to use with 3-digit numbers. Throughout the lesson, place value is used as a starting point for deepened thought about addition algorithms, with final arrival at the standard algorithm for addition.

Procedural Skill Students rely on their knowledge of addition and estimation to add numbers with up to 3 digits. Students improve their fluency in addition as they solve problems that require regrouping.

New Vocabulary

algorithm, standard algorithm

Materials

- Place-value blocks (or Teaching Tool 37), optional

Student Resources

 Family Engagement

Intervention System (IS)

G10 Adding Three-Digit Numbers

G18 Adding Greater Numbers

Teacher Resources

Available at
Savvas Realize®

 Editable Lesson Plan

 Lesson Presentation Slides

 enVision on the Go: Planning Support



Texas Essential Knowledge and Skills (TEKS)

Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:

4.4A* add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.

*Readiness Standard

Mathematical Process Standards

The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

4.1C select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.

4.1D communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

4.1F analyze mathematical relationships to connect and communicate mathematical ideas.

Language Support

Think Aloud Use this activity with Box C of the Visual Learning to help students explain what they are thinking during each step of the standard algorithm for addition.

Begin by writing the problem on the board. As you complete each step using the standard algorithm, say out loud what you are thinking. Say:

First, I add the ones, which equals 15, so I have to regroup the 15 into a single ten and five ones. I place a 1 above the 5 in the equation.

Then, I add the tens which is the 5, the 7, and the 1 I wrote above. This equals 13 tens. I have to regroup.

Finally, I add the hundreds. 3 + 2 + 1 equals 6 hundreds. I write a 6 in the hundreds place to arrive at the answer.

Have students repeat this process using an example from the Practice and Problem Solving. Ask them to share their thinking out loud with a partner during each step of the standard algorithm.

Math Talk Available at Savvas Realize®

Number Strings

What is each number rounded to the nearest 10?

300 + 50 + 9

5 hundreds
17 ones

234

360, 520, 230

TEKS 4.2B, 4.2D Use anytime.

Number Sense Present a set of related math problems, one problem at a time, to students. For each problem, students first think about the problem and their solution strategy. Then they share their strategies and solutions. Represent student strategies and facilitate discussion about relationships within and between problems.

Exit Ticket

Formative Assessment

Name

Lesson 2-1
Exit Ticket

1. Choose the correct sum of 354 + 267.

A 501

B 621

C 611

D 113

2. Choose the correct sum of 183 + 697.

A 770

B 870

C 880

D 580

Have you met the lesson goals?

Math Goal

I can connect place value concepts to using addition algorithms.

I Can

With Help

Not Yet

Language Goal

I can tell the steps I have used to add numbers using the standard algorithm.

I Can

With Help

Not Yet

Teacher Answer Key

Assessment 1 of 1

Copyright © Savvas Learning Company LLC. All Rights Reserved.

TEKS 4.4A, DOK 1, Math Process 4.1C

You can use the Assessment Sourcebook version or the auto-scored version at Savvas Realize®.

Use the Exit Ticket results to support students as needed by reminding them that they can use place value in combination with partial sums or the standard algorithm when adding 3-digit whole numbers. If students need additional assistance, complete the following example using each method.

724
+ 187

English Language Proficiency Standards (ELPS)

LISTENING 1E Demonstrate listening comprehension from information presented orally during formal and informal classroom interactions by restating, responding, paraphrasing, summarizing, or asking for clarification or additional details.

College and Career Readiness Standards (CCRS)*

I.A.2 Perform computations with rational and irrational numbers.

I.B.1 Use estimation to check for errors and reasonableness of solutions.

*Standards in **VII** Problem Solving and Reasoning, **VIII** Communication and Representation, and **IX** Connections are infused throughout the program.

Lesson 2-1 35B

EP

AC_ENV27_TE_04_TX_ENG_T02_L01_SCL.indd 2

18/05/25 8:41 PM

Step 1 Explore and Share | ENGAGE & EXPLORE



10-15 min



Explore and Share



Scout Observational Assessment

Name _____

Add Whole Numbers

I can ... connect place-value concepts to using addition algorithms.

TEKS 4.4A The student is expected to add and subtract whole numbers and decimals to the hundredths place using the standard algorithm. Mathematical Process Standards 4.1C, 4.1D, 4.1F

Let's Build

Lesson 2-1

Explore and Share

Students collect empty milk cartons to recycle. How many milk cartons were collected in the first two months? How many milk cartons were collected in all three months? **Solve this problem any way you choose.**



Select tools, such as drawings or place-value blocks, to help you add.



See margin for sample student work.

Copyright © Savvas Learning Company LLC. All Rights Reserved.

Lesson 2-1 35

Explore and Share



Formative Assessment

Purpose Investigate ways to add 3-digit whole numbers.

Materials Place-value blocks (or Teaching Tool 37), optional

Introduce WHOLE CLASS

Ask: Have you ever recycled cartons or plastic bottles?

How many did you collect?

Monitor, Select, and Sequence SMALL GROUP

Observe students at work.

- **What tools do students use to help them represent and solve the problem?** They might use a drawing or place-value blocks.
- **Which addition algorithms do students use to solve the problem?** They might use partial sums or the standard algorithm for addition. Alternatively, they may rely instead on only a drawing or model.

Look for solutions that use addition algorithms. If students use an addition algorithm to add 357, 243, and 468, ask: **How did place value help you when using addition algorithms?**

Select solutions for students to present. Show solutions that used visual models or place value blocks (Michael) before solutions that used algorithms (Taylor).

Early Finishers

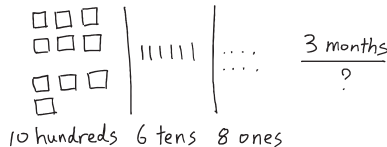
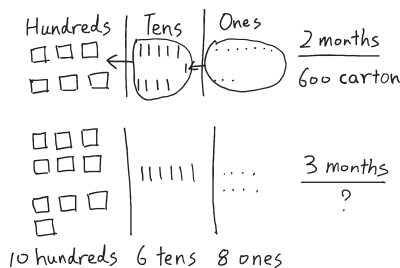
Ask: How many cartons were collected in only October and November? [711] Ask: How many were collected in only September and November? [825]

Connect WHOLE CLASS

Connect Solution Strategies Discuss students' work. Connect Taylor's use of partial sums with Michael's use of a drawing. Explain that both students use place-value understanding to help them reach their answer, but Taylor uses an addition algorithm while Michael does not.

Connect to the Visual Learning During the Visual Learning, connect to student work in Explore and Share. Be sure students understand that place-value concepts are helpful when using addition algorithms, such as partial sums and the standard algorithm.

Sample Student Work



10 hundreds 6 tens 8 ones

Michael's Work

Michael used a drawing. He circled the blocks in the ones and tens columns. 10 ones is equal to 1 ten, so he circled it and moved it to the tens column. Then 10 tens is equal to 1 hundred, so he circled it and moved it to the hundreds column.

Taylor's Work

Taylor used the partial sums addition algorithm and previous knowledge of place value. She added the number of cartons collected in November to the sum of the first two months.

Two Months	Three Months
$\begin{array}{r} 357 \\ + 243 \\ \hline 10 \\ 90 \\ + 500 \\ \hline 600 \end{array}$	$\begin{array}{r} 600 \\ + 468 \\ \hline 8 \\ 60 \\ + 1000 \\ \hline 1,068 \end{array}$

Step 2 Visual Learning | EXPLAIN



5-10 min

Visual Learning Animation

Essential Question How Do You Add Whole Numbers Efficiently?

Visual Learning

A The students at Kennedy Elementary School collected paper to recycle. How many pounds of paper did they collect in all?
Add $358 + 277$.

Paper Collected	
Month	Pounds
March	358
April	277

B Add using partial sums.

$$\begin{array}{r} 358 \\ + 277 \\ \hline 15 \\ 120 \\ + 500 \\ \hline 635 \end{array}$$

8 ones + 7 ones = 15 ones
5 tens + 7 tens = 12 tens
3 hundreds + 2 hundreds = 5 hundreds

C Add using the standard algorithm.

Step 1 Add ones.

$$\begin{array}{r} 358 \\ + 277 \\ \hline 5 \end{array}$$
 8 ones + 7 ones = 15 ones
Regroup: 15 ones = 1 ten + 5 ones

Step 2 Add tens.

$$\begin{array}{r} 358 \\ + 277 \\ \hline 35 \end{array}$$
 5 tens + 7 tens + 1 ten = 13 tens
Regroup: 13 tens = 1 hundred + 3 tens

Step 3 Add hundreds.

$$\begin{array}{r} 358 \\ + 277 \\ \hline 635 \end{array}$$
 3 hundreds + 2 hundreds + 1 hundred = 6 hundreds

The students collected 635 pounds of paper.

Talk About Math Ideas When you add partial sums, you can add the ones first or the hundreds first. Can you do the same when you add using the standard algorithm?

Target ELPS Support LISTENING 1E

Pre-Production Provide students with note cards showing a problem being solved with either partial sums or the standard algorithm. Say “partial sums” or “standard algorithm” and have students hold up the matching card.

Beginning In small groups, have students solve a multi-digit addition problem using both methods. Each group should state their preferred method.

Intermediate Describe how to solve a problem using the standard algorithm or partial sums. Have students identify which method was used.

High Intermediate Pair students and have them take turns describing how to solve a multi-digit addition problem using either method. Each partner identifies the strategy described.

Advanced Challenge students to create and solve their own multi-digit addition problems using both methods. They should then present their solutions to the class and explain their thinking.

Visual Learning

Classroom Conversation

A Ask: How would you use rounding to estimate the sum? [Sample answer: I would round to the nearest hundred to get $400 + 300 = 700$] Ask: Will the actual answer be greater than or less than the estimated sum? Explain. [Less because both numbers were rounded up]

B Analyze Ask: How do you know if you need to regroup? [Sample answer: You need to regroup if the sum of the digits in a place value is greater than 9] Ask: How would you regroup ones using place-value tools, such as blocks? [Sample answer: I would exchange 10 of a lesser place-value block for 1 of the next greater place-value block.]

C Ask: What do the two small 1s above 358 represent when using the standard algorithm? [Sample answer: They represent the regrouped ten and the regrouped hundred.]

Language Support: Use the activity in the Lesson Opener.

Prevent Misconceptions Watch for students who did not get a reasonable estimate. Ensure that they understand that it is important to check that they have correctly rounded the numbers to get a reasonable result.

Language Routine: Critique, Correct, and Clarify

Display the problem $358 + 277$ on the board. In the sample, the student has placed a small number 15 over the 5 when using the standard algorithm for addition. Ask: Can you identify the error? Why is this incorrect? [The student wrote 15 instead of 1 over the 5 in 358 when using the algorithm. This is incorrect because a 1 represents a regrouped ten. The 5 should be written below since these are ones and not tens.]

Talk About Math Ideas

Have students engage in a think-pair-share to connect partial sums to the standard algorithm, including how place value is used in each. Listen for conversations about the similarities and differences between the addition algorithms. Regarding place value, listen for conversations about regrouping, ones, tens, and hundreds.

Revisit the Essential Question

Point out to students that in order to find the number of pounds of paper collected, they used the standard algorithm to add $358 + 277$. Discuss how using previous knowledge of place value and addition algorithms, like partial sums and the standard algorithm, can help them to add whole numbers efficiently.

Step 3 Practice and Problem Solving | ELABORATE

15-20 min

Interactive Practice Adaptive Practice

You may opt to have students complete automatically scored practice items online.

Name _____

Guided Practice

Do You Understand?

1. When you place a 1 above the tens values, what does it mean?
Sample answer: It means that there were 10 or more ones and that 10 ones were regrouped as 1 ten.

2. When you place a 1 above the hundreds values, what does it mean?
Sample answer: It means that there were 10 or more tens and that 10 tens were regrouped as 1 hundred.

Do You Know How?

Find the sum by using partial sums and by using the standard algorithm.

3.
$$\begin{array}{r} 378 \\ + 557 \\ \hline 935 \end{array}$$

For 4-6, find each sum using the strategy you choose.

4.
$$\begin{array}{r} 678 \\ + 253 \\ \hline 931 \end{array}$$

5.
$$\begin{array}{r} 325 \\ + 256 \\ \hline 581 \end{array}$$

6.
$$\begin{array}{r} 185 \\ + 253 \\ \hline 438 \end{array}$$

Practice and Problem Solving

For 7-15, find each sum using the standard algorithm for addition.

7.
$$\begin{array}{r} 148 \\ + 157 \\ \hline 305 \end{array}$$

8.
$$\begin{array}{r} 389 \\ + 461 \\ \hline 850 \end{array}$$

9.
$$\begin{array}{r} 365 \\ + 58 \\ \hline 423 \end{array}$$

10.
$$\begin{array}{r} 126 \\ + 138 \\ \hline 264 \end{array}$$

11.
$$\begin{array}{r} 371 \\ + 404 \\ \hline 775 \end{array}$$

12.
$$\begin{array}{r} 357 \\ + 498 \\ \hline 855 \end{array}$$

13. $142 + 178 = 320$

14. $565 + 694 = 1,259$

15. $375 + 548 = 923$

16. **Higher Order Thinking** Sipala solved this problem using the standard algorithm, but she made an error. What was her error, and how can she fix it?

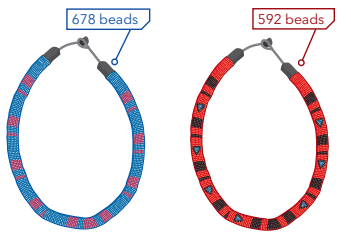
$$\begin{array}{r} 437 \\ + 175 \\ \hline 5,112 \end{array}$$

Sample answer: Sipala added the tens and recorded 11 tens below the line instead of regrouping 10 tens as 1 hundred and recording it above the hundreds place. Sipala should record the regrouped 1 hundred above the 4 and then add the hundreds, $4 + 1 + 1 = 6$. The correct sum is 612.

17. **Analyze** On Saturday, a movie theater sold 416 tickets to the afternoon show and 290 tickets to the evening show. How many tickets in all did they sell on Saturday?
706 tickets

18. **Communicate** Use place-value ideas to explain how you can tell just by looking at the numbers that $446 + 813$ is greater than 1,000.
Sample answer: The first number has 4 hundreds and the second number has 8 hundreds. So, altogether, there will be at least 12 hundreds. 1,000 is only 10 hundreds.

19. The Maasai necklace is an East African necklace made with tiny beads. Marla made the two bead necklaces shown. How many beads did she use?
1,270 beads



STAAR Assessment Practice

20. Select all the correct sums. 4.4A

☒ $742 + 353 = 1,095$

☐ $428 + 247 = 665$

☒ $604 + 684 = 1,288$

☒ $735 + 298 = 1,033$

☐ $912 + 198 = 1,010$

21. What is the missing digit in the addition problem? 4.4A

$$\begin{array}{r} 3 \boxed{4} 5 \\ + 6 \boxed{5} 9 \\ \hline 1,004 \end{array}$$

Guided Practice

Formative Assessment

Error Intervention Item 3

If students need assistance using partial sums, then remind students that to use partial sums, they need to add the hundreds together, the tens together, and the ones together. While the order of the partial sums does not change the sum, you may wish to get students in the habit of adding from right to left.

Choose Efficient Strategies Remind students that for both partial sums and the standard algorithm for addition, place value is important and must be considered.

Item 2 Communicate It may be helpful to have students first refer back to the Visual Learning and explain regrouping.

37-38 Lesson 2-1

Practice and Problem Solving

Targeted ELPS Support

Item 16 Higher Order Thinking Analyzing mistakes. Students may need a visual representation to help them understand what Sipala did incorrectly when using the standard algorithm. Have students model the correct addition by using place-value blocks.

Item Analysis: Practice and Problem Solving

Item	DOK	TEKS	
		Content	Process
7-15, 19-21	1	4.4A	
16	3	4.4A	
17	2	4.2A	4.1F
18	2	4.2A	4.1D

Step 4 Assess and Differentiate | EVALUATE

15-30 min

Quick Check



✓ Assess lesson content with the Quick Check. Check marks in Practice and Problem Solving indicate items for prescribing differentiation. Items 14 and 20: 1 point. Item 17: up to 3 points. See the Item Analysis on the previous page. The online Quick Check is **automatically scored** and **remediation, practice, or enrichment** will be assigned based on student performance.

0-3 points: Intervention Activity (below) and Reteach to Build Understanding Activity

4-5 points: Enrichment Activity

In addition, **emergent bilingual students** may benefit from the Build Mathematical Literacy Activity.

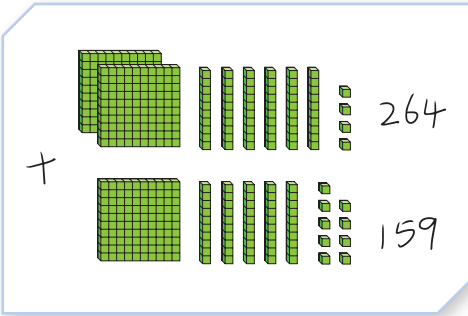
Differentiation Library

- Additional Differentiation Library resources are described at the start of this topic.
- Differentiation resources that support diverse learning styles are online and in the Differentiation Library Teacher's Guide.

Intervention Activity

Materials Place-value blocks (or Teaching Tool 37), or student drawn blocks

- Write five different 3-digit addition problems on the board that require regrouping. Include at least two problems that require regrouping in two places.
- Remind the students that regrouping is required when the sum of the digits in any place is greater than 9.
- Ask students to identify the regrouping in each problem, and then use their place-value blocks to find the sums.
- When finished, have student pairs write their own problems and repeat the activity.



Video Tutorial

Available at Savvas Realize®
Students can access this video anytime to reinforce lesson content.

Another Look Video

Additional Practice

Printable or autoscored at Savvas Realize®

Additional Practice 2-1

Another Look!

Add 137 + 145.

Step 1
Add ones.
7 ones + 5 ones = 12 ones
Regroup: 12 ones = 1 ten + 2 ones

Step 2
Add tens.
3 tens + 4 tens + 1 ten = 8 tens

Step 3
Add hundreds.
1 hundred + 1 hundred = 2 hundreds

137
+ 145

282

For 1-12, find each sum.

1. 456 + 134 ----- 590	2. 638 + 257 ----- 895	3. 263 + 375 ----- 638
4. 914 + 435 ----- 1,349	5. 829 + 413 ----- 1,242	6. 585 + 387 ----- 972
7. 87 + 526 ----- 613	8. 845 + 178 ----- 1,023	9. 659 + 486 ----- 1,145
10. 384 + 491 ----- 875	11. 591 + 680 ----- 1,271	12. 745 + 557 ----- 1,302

Copyright © Savvas Learning Company LLC. All Rights Reserved. Topic 2 | Lesson 2-1 11

The table shows the miles a 12-player soccer team travels to play teams in other cities. Use the table to answer 13-14.

13. In October, the team traveled to Tampa and to Gainesville. How many miles did they travel in all?
538 miles

14. **Explain** In August, the team traveled to Tallahassee and St. Augustine. In September, they traveled to Gainesville and Daytona Beach. In which month did they travel farther? Explain.
August; Sample answer: 334 + 82 = 416, 142 + 180 = 322, 416 > 322

City	Miles (round trip)
Daytona Beach	180
Gainesville	142
St. Augustine	82
Tallahassee	334
Tampa	396

15. **Analyze** How many times do you need to regroup to add 873 + 465? Explain.
2 times; Sample answer: Because 70 + 60 > 100, you regroup 10 tens as a hundred. Because 800 + 400 + 100 > 1,000, you regroup 10 hundreds as a thousand.

16. **Higher Order Thinking** Wapi added two 3-digit numbers and he did not have to regroup. What numbers could Wapi have added? Kyla added two 3-digit numbers and she had to regroup three times. What numbers could Kyla have added?
Sample answer: Wapi could have added 125 + 243; Kyla could have added 678 + 596.

STAAR Assessment Practice

17. Select all the correct sums.

☐ 646 + 259 = 895
☒ 828 + 147 = 975
☒ 295 + 768 = 1,063
☐ 388 + 375 = 753
☒ 952 + 484 = 1,436

18. Which is the missing addend?
556 + _____ = 1,046
☐ A 510
☐ B 480
☒ C 490
☐ D 523

12 Topic 2 | Lesson 2-1 Copyright © Savvas Learning Company LLC. All Rights Reserved.

Item Analysis: Additional Practice

Item	DOK	TEKS	
		Content	Process
1-13, 17-18	1	4.4A	
14	2	4.4A	4.1G
15	2	4.2A	4.1F
16	3	4.2A	

Let's Investigate

Lesson

2-5

Adding and Subtracting Whole Numbers

KEY CONCEPTS

Mathematics Objective Add and subtract whole numbers using prior knowledge of place value and estimation, an understanding of addition and subtraction with lesser numbers, and various pictorial and concrete representations.

Language Objective Describe and explain, orally and in writing, how to add and subtract 4-digit whole numbers.

Essential Understanding The standard algorithms for addition and subtraction are both done using place value, starting at the ones, then the tens, and so on. Regrouping is done when needed.

COHERENCE

Look Back Previously, students added and subtracted 3-digit whole numbers. They also estimated sums and differences by rounding or by using compatible numbers.

This Lesson Students add and subtract 4-digit numbers. They use estimation before solving to determine if their answers are reasonable.

Look Ahead The next three lessons explicitly develop the skills to add and subtract multi-digit numbers as well as subtract numbers with zeros.

BALANCE

Conceptual Understanding Students find the sum or difference of 4-digit numbers by using models or drawings. They recognize they can use estimation before solving to check if their answer is reasonable.

Reinforce Vocabulary

estimate, place value

Materials

- Place-value blocks (or Teaching Tools 37 and 38), optional

Student Resources

 Family Engagement

Intervention System (IS)

G13 Estimating Sums and Differences of Greater Numbers

G15 Subtracting Four-Digit Numbers

G17 Adding Four-Digit Numbers

Teacher Resources

Available at
Savvas Realize®

 Editable Lesson Plan

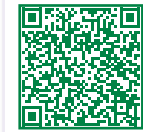
 Lesson Presentation Slides

 Slow Reveal Slides

 Sample Student Work

 Exit Ticket and Teacher Support

 enVision on the Go: Planning Support



Texas Essential Knowledge and Skills (TEKS)

Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:

4.4A* add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.

4.4G round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers.

* Readiness Standard

Mathematical Process Standards

The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

4.1C select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.

4.1D communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

4.1F analyze mathematical relationships to connect and communicate mathematical ideas.

 **Targeted ELPS Support SPEAKING 2B**

 **College and Career Readiness 1.A.2**

Step 1 Investigate



15-25 min



Investigate



Scout Observational Assessment

Name _____

Adding and Subtracting Whole Numbers

I can ... use what I know about place value and estimation to add and subtract multi-digit whole numbers.

TEKS 4.4A The student is expected to add and subtract whole numbers and decimals to the hundredths place using the standard algorithm. Also **4.4G Mathematical Process Standards 4.1C, 4.1D, 4.1F**

Let's Investigate

Lesson 2-5

Read-a-thon

Marta and Roshan's school is holding a read-a-thon. Each class in the third grade, fourth grade, and fifth grade reports the total number of pages the students have read. If a class meets their goal, they win a trophy.

Marta is helping the school librarian figure out the totals for each grade.

BOOKMOBILE

Read-a-thon

3rd Grade		4th Grade		5th Grade	
Room No.	Total Pages	Room No.	Total Pages	Room No.	Total Pages
118	2,416	134	2,875	150	3,461
126	3,088	140	4,234	158	5,355
130	2,739	144	3,610	160	3,210
TOTAL					
GOAL 8,000		10,000		12,000	

A Make a quick estimate. Do you think any of the classes will win a trophy?

B Find the actual totals. Which classes should receive a trophy?

Copyright © Savvas Learning Company LLC. All Rights Reserved. Lesson 2-5 51

Solve the problems any way you choose. You may use place-value blocks or draw pictures to help. Show your thinking.

Check students' work.

A. Make a quick estimate. Do you think any of the classes will win a trophy? Explain.
Sample estimates: 3rd grade: 8,200; 4th grade: 10,700; 5th grade: 12,100; All three classes will probably win a trophy.

B. Find the actual totals. Which classes should receive a trophy?
3rd grade: 8,243; 4th grade: 10,719; 5th grade: 12,026; All three classes should receive a trophy.

BUILD G.R.I.T.
Grow confidence.

52 Lesson 2-5 Copyright © Savvas Learning Company LLC. All Rights Reserved.

Anticipate

Anticipate students' solution strategies. Think of ways students might use their prior knowledge to solve the problems. See the next page for sample student work.

Introduce the Investigation WHOLE CLASS

Use the Slow Reveal Slides You might use the slides to reveal part of the information. Then ask: *What do you notice? What do you wonder?*

Elevate Student Voice: Engage Students in the Context

Have students bring their own unique experiences and ideas to the situation by using prompts like these, ask:

- Have you ever participated in a Read-a-Thon? If so, what books did you read?
- Have you or other family members ever visited a bookmobile?
- On your next trip to a library or bookmobile, what types of books would you like to borrow?

Check for Understanding

Language Routine: Three Reads

Read the task to the class. Ask:

- What is the task about?
- How is Marta helping the school librarian?

Have students read the task by themselves. Ask:

- What information is given in the task?
- How many rooms and grades are participating in the Read-a-Thon?

Have a student read the task to the class. Ask:

- What is the task asking you to find?
- What questions did Marta and Roshan ask?

Step 1 Investigate *continued*

Sample Student Work Available at Savvas Realize®

Read-a-Thon Problem A

Estimate the total number of pages read for a read-a-thon by each of three grades (estimate sums of 4-digit numbers) and estimate if the reading goal was met (compare whole numbers).

- **Mercedes attempted to round each number to the nearest thousand. Misconception** She changed each number to the next thousand up, regardless of the number of hundreds, so she did not round correctly.

$$\begin{array}{r} \text{3rd} \\ 2,416 \\ 3,000 \\ \hline \end{array} + \begin{array}{r} 3,088 \\ 4,000 \\ \hline \end{array} + \begin{array}{r} 2,739 \\ 3,000 \\ \hline \end{array} = 10,000 \text{ trophy}$$
$$\begin{array}{r} \text{4th} \\ 2,875 \\ 3,000 \\ \hline \end{array} + \begin{array}{r} 4,234 \\ 5,000 \\ \hline \end{array} + \begin{array}{r} 3,610 \\ 4,000 \\ \hline \end{array} = 12,000 \text{ trophy}$$
$$\begin{array}{r} \text{5th} \\ 3,461 \\ 4,000 \\ \hline \end{array} + \begin{array}{r} 5,355 \\ 6,000 \\ \hline \end{array} + \begin{array}{r} 3,210 \\ 4,000 \\ \hline \end{array} = 14,000 \text{ trophy}$$

You might ask Mercedes: *Is 3,210 closer to 3,000 or 4,000?* [Listen for: "3,000. Oh, I didn't round that number right."]

- **Yumiko used rounding and compatible numbers.**

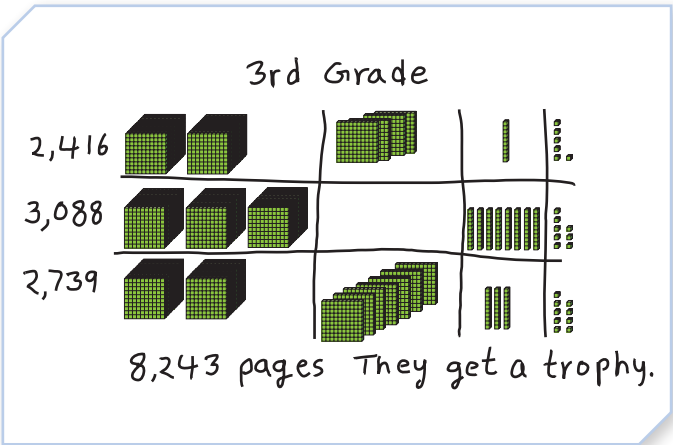
3rd Grade	4th Grade	5th Grade
$2,416 \rightarrow 2,500$	$2,875 \rightarrow 3,000$	$3,461 \rightarrow 3,500$
$3,088 \rightarrow 3,000$	$4,234 \rightarrow 4,000$	$5,355 \rightarrow 5,500$
$2,739 \rightarrow 2,500$	$3,610 \rightarrow 3,500$	$3,210 \rightarrow 3,000$
$8,000$	$10,500$	$12,000$
3rd grade: about 8,000 pages	4th grade: about 10,500 pages	5th grade: about 12,000 pages
All the grades should get a trophy.		

You might ask Yumiko: *How did numbers like 2,500 help you use mental math?* [Listen for: "I know $25 + 25 = 50$, so $2,500 + 2,500 = 5,000$."]

Read-a-Thon Problem B

Find the actual total number of pages read in each of three grades (add 4-digit numbers) and determine if the reading goal was met (compare whole numbers).

- **Victor used place-value blocks to help him add the numbers together.**



You might ask Victor: *How did you know when to regroup?* [Listen for: "When I got 10 of one block, I traded it for 1 of the next bigger block."]

- **Anna used partial sums to add two numbers at a time.** Then she added that total to the third number.

3rd	4th	5th
$2,416 + 3,088 = 5,504$	$2,875 + 4,234 = 7,109$	$3,461 + 5,355 = 8,816$
$5,504 + 2,739 = 8,243$	$7,109 + 3,610 = 10,719$	$8,816 + 3,210 = 12,026$
8,243 > 8,000 trophy	10,719 > 10,000 trophy	12,026 > 12,000 trophy

You might ask Anna: *Does it matter whether you add the ones first or the thousands first?* [Listen for: "No, as long as I add the same kind of places, I get the same answer."]

Step 1 Investigate *continued*

Step 2 Connect



10-15 min

Monitor SMALL GROUP

Monitor Students at Work Ask questions to assess and advance students' thinking.

Assessing Questions

Questions for Students to Understand Their Thinking

- Can you tell/show me what you did?
- What do those blocks/pictures/numbers mean?

Questions for You as You Observe

- How are students estimating and calculating the sums?
- What prior knowledge are students using to help solve the problems?

Advancing Questions

Questions to Ask Students Who Need Help

- If students cannot get started, ask: *What do you have to do in order to determine if a grade will get a trophy?*
- If students' work is incorrect, ask: *How did you get that answer?* Listen for understandings and build on students' strengths.

Questions to Have Students Think More Deeply

- Is there another way to solve the problem?
- When is it necessary to regroup?

Early Finishers

Ask: Which grade passed their goal by the greatest number of pages? Explain. [Grade 4; Sample answer: Grade 3 passed their goal by $8,243 - 8,000 = 243$ pages; Grade 4 passed their goal by $10,719 - 10,000 = 719$ pages; Grade 5 passed their goal by $12,026 - 12,000 = 26$ pages. As $719 > 243 > 26$, Grade 4 passed their goal by the greatest number of pages.]

Select and Sequence WHOLE CLASS

Select and Sequence Students' Solutions for them to present with the goal of building understanding of key concepts.

Start with basic solutions that simply add the thousands to make estimates and use place-value drawings or blocks to find actual sums. (Victor)

Then show solutions that use rounding to make estimates and partial sums to add two numbers at a time. (Anna)

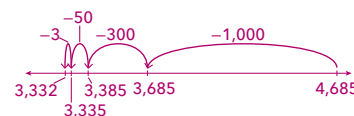
Finally, show solutions that use various strategies to make estimates and add three numbers at a time. (Yumiko)

Connect INDIVIDUAL WHOLE CLASS

Name _____

Connect

- 1. Communicate** About how much greater is the number of pages the fourth graders read than the number of pages the third graders read? How did you make your estimate?
Sample answer: About 2,500 pages. I rounded each number to the nearest 100: $10,719 - 8,243$ is about $10,700 - 8,200$. Then I counted up from 8,200 to 10,700: $8,200 + 2,500 = 10,700$.
- 2. Connect** Use the sum in the first equation to find the sum in the second equation. How did you use the first sum to help?
 $267 + 423 = 690$
 $1,267 + 2,423 = ?$
3,690; Sample answer: The hundreds, tens, and ones digits are the same in both problems, so the hundreds, tens, and ones digits in the sum will be the same. I added the digits in the thousands place to find the thousands digit in the sum.
- 3. Analyze** Use the difference in the first equation to find the difference in the second equation. How did you use the first difference to help?
 $854 - 688 = 166$
 $7,854 - 2,688 = ?$
5,166; Sample answer: The hundreds, tens, and ones digits are the same in both problems, so the hundreds, tens, and ones digits in the difference will be the same. I subtracted the digits in the thousands place to find the thousands digit in the difference.
- 4. Select Tools** Estimate $4,685 - 1,353$. Then show how you could use place-value ideas to find the difference. You can use a number line or place-value blocks to help.
Sample answer: Estimate: 3,300; actual difference: 3,332



Talk About Math Ideas What strategies for adding and subtracting 3-digit numbers can be used for adding and subtracting greater numbers?

Copyright © Savvas Learning Company LLC. All Rights Reserved.

Lesson 2-5 53

Connect Solution Strategies Discuss students' work. Ask how the solutions are similar and different. Deon rounded to the nearest thousand and compared, whereas Yumiko rounded and used compatible numbers. They both used rounding to estimate sums with greater numbers. Victor used place-value blocks to find the sum of three numbers, whereas Anna used partial sums to add two numbers and then added that to the third number to find the total.

Connect to Key Concepts Use the Connect questions to build understanding of the key concept at the top of the next page.

Talk About Math Ideas

Have students engage in a think-pair-share to discuss strategies used with adding and subtracting 3-digit numbers and how each may apply to adding and subtracting greater numbers with more digits. Listen for conversations about strategies such as partial sums or partial differences are the same, just with additional places.

Step 3 Practice and Problem Solving



10-15 min



Interactive Practice



Adaptive Practice

Find $1,524 + 3,219 + 2,576$.
Estimate: $2,000 + 3,000 + 3,000 = 8,000$

One Way Find the sum of the first two numbers. Then add the sum to the third number.

Step 1

$$\begin{array}{r} 1,524 \\ + 3,219 \\ \hline 4,000 \\ 700 \\ 30 \\ + 13 \\ \hline 4,743 \end{array}$$

Step 2

$$\begin{array}{r} 4,743 \\ + 2,576 \\ \hline 6,000 \\ 1,200 \\ 110 \\ + 9 \\ \hline 7,319 \end{array}$$

Another Way Add all three numbers at the same time.

$$\begin{array}{r} 1,524 \\ 3,219 \\ + 2,576 \\ \hline 6,000 \\ 1,200 \\ 100 \\ + 19 \\ \hline 7,319 \end{array}$$

To add multi-digit numbers, it helps to estimate before you find the sum. That way, you can compare your estimate to your calculation to make sure your answer is reasonable.



Lesson Help



Practice and Problem Solving

For **5-7**, estimate first. Then solve any way you choose.

Sample estimates are given.



5. $5,423 - 3,270 = ?$

Estimate: **2,000**
Actual: **2,153**



6. $2,525 + 3,700 = ?$

Estimate: **6,200**
Actual: **6,225**

7. $1,295 + 6,925 = ?$

Estimate: **8,000**
Actual: **8,220**

For **8-9**, use your sums from Exercise B of the read-a-thon problem to answer these questions.

8. How much greater is the number of pages the fifth graders read than the number of pages the third graders read?

3,783 pages

9. How much greater is the number of pages the fifth graders read than the number of pages the fourth graders read?

1,307 pages

STAAR Assessment Practice



10. Find the sum. $\odot$ 4.4A

$1,550 + 2,325 = ?$

- ☐ A 1,875
☐ B 3,825

- ☐ C 3,835
☒ D 3,875

11. Find the difference. $\odot$ 4.4A

$6,512 - 2,105 = ?$

- ☐ A 3,407
☒ B 4,407

- ☐ C 4,607
☐ D 7,607

54 Lesson 2-5

Copyright © Savvas Learning Company LLC. All Rights Reserved.

Reflection

Have students look at the two strategies at the top of the page. Say: **Describe how these strategies are similar.** [Both strategies use addition to find the sum.] Say: **Describe how these strategies are different.** [One strategy adds two numbers together and then adds the third number to the sum of the first two numbers. The other strategy adds all three numbers together at the same time to find the total sum.] Ask: **Why might you estimate the sum of the three numbers before adding them together?** [Estimating the numbers first can help identify whether the answer is reasonable.]

Error Intervention Item 3

If students round the numbers incorrectly, **then** remind them that they should be using the hundreds to determine the number rounded to the thousands.

Items 4-5 You may wish to have students use place-value blocks to find the difference in pages read by third or fourth and fifth graders.

Item Analysis: Connect; Practice and Problem Solving

Item	DOK	TEKS	
		Content	Process
1	2	4.4A	4.1D
2-3	2	4.4A	4.1F
4	2	4.4A	4.1C
5-11	1	4.4A	

Targeted ELPS Support $\odot$ SPEAKING 2B

Pre-Production Reread Items 4 and 5 with students. As you point to each step, ask Yes-No questions, such as “Does $1,000 + 3,000$ equal 4,000?”

Beginning Reread Items 4 and 5. Say the steps aloud that students will take to solve the problem.

Intermediate Reread Items 4 and 5. Ask them to complete the sentence stem for their partners: “I will _____ to find the _____ of pages read in 3rd, 4th, and 5th Grade. Then I will _____ the total pages to the goal to identify if each Grade met their goal.”

High Intermediate Reread Items 4 and 5. Ask them to complete the sentence stem: “I will _____ to find the _____ of pages read in 3rd, 4th, and 5th Grade. Then I will _____ the total pages to the goal to identify if each Grade met their goal.”

Advanced Have students read Items 4 and 5 with a partner. Ask them to identify the operation(s) and steps that they will use to solve each.

54 Lesson 2-5

Step 4 Assess and Differentiate

10-20 min

Quick Check

Formative Assessment

✓ Assess lesson content with the Quick Check. Check marks in Practice and Problem Solving indicate items for prescribing differentiation. Item 10: 1 point. Items 5 and 6: 2 points each. See the Item Analysis on the previous page. The online Quick Check is **automatically scored** and **remediation, practice, or enrichment** will be assigned based on student performance.

0-3 points: Intervention Activity (below) and Reteach to Build Understanding Activity

4-5 points: Enrichment Activity

In addition, **emergent bilingual students** may benefit from the Build Mathematical Literacy Activity.

Differentiation Library

DL

- Additional Differentiation Library resources are described at the start of this topic.
- Differentiation resources that support diverse learning styles are online and in the Differentiation Library Teacher’s Guide.

Intervention Activity

Materials Place-value blocks (or Teaching Tools 37 and 38), or student drawn blocks, Paper, Pencil

- Have students use place-value blocks, or draw blocks, to add the pages read for two of the rooms in 3rd Grade.
- Make sure that students regroup the blocks as needed to find the correct total.
- Then have students add the third number to the sum of the first two numbers by using the place-value blocks or drawing them. Students should repeat the process to find the total number of pages read for 4th and 5th Grades.

Video Tutorial

Available at Savvas Realize®

Students can access this video anytime to reinforce lesson content.

Another Look Video

Additional Practice

Printable or autoscored at Savvas Realize®

Adding and Subtracting Whole Numbers

2-5

Another Look!

Find $7,893 - 3,286$.
Estimate: $8,000 - 3,000 = 5,000$

7,893

- 3,000

4,893

- 200

4,693

- 80

4,613

- 6

4,607

4,607

4,613

4,693

4,893

7,893

You can line up the digits by place value to add or subtract. Subtract one place at a time. Regroup as needed.

For 1-3, estimate first. Then solve any way you choose. Sample estimates are given.

1. $6,943 - 2,150 = ?$
Estimate: **5,000**
Actual: **4,793**

2. $4,325 + 5,600 = ?$
Estimate: **10,000**
Actual: **9,925**

3. $4,895 + 3,125 = ?$
Estimate: **8,000**
Actual: **8,020**

4. Darnell says the sum of 1,354 and 5,680 is about 6,000. Is Darnell's estimate reasonable? Explain.
No, Darnell's estimate is too low. Sample answer: 1,354 is about 1,000, and 5,680 is about 6,000. $1,000 + 6,000 = 7,000$, so 7,000 is a better estimate.

5. Find the sum of 1,354 and 5,680. Use any strategy. Show your work.
7,034; Check students' work.

6. **Connect** Use the sum in the first equation to find the sum in the second equation. How did you use the first sum to help?
 $342 + 532 = 874$
 $2,342 + 7,532 = ?$
9,874; The hundreds, tens, and ones digits are the same in both problems, so the hundreds, tens, and ones digits in the sum will be the same. Add the digits in the thousands place to find the thousands digit in the sum.

7. **Analyze** Use the difference in the first equation to find the difference in the second equation. How did you use the first difference to help?
 $523 - 176 = 347$
 $3,523 - 2,176 = ?$
1,347; Sample answer: The hundreds, tens, and ones digits are the same in both problems, so the hundreds, tens, and ones digits in the difference will be the same. Subtract the digits in the thousands place to find the thousands digit in the difference.

8. Kiyō's family loves music. The table shows the numbers of songs on their computer. How many country and pop songs are there? How many rock and rap songs are there?
**Country and Pop: 4,983 songs
Rock and Rap: 3,230 songs**

Type	Number of Songs
Country	715
Pop	4,268
Rock	2,387
Rap	843

9. **Higher Order Thinking** In a week, a farmer collected 3,978 red apples and 2,004 green apples. He sold a total of 4,856 apples. He took the rest of the apples to the Farmer's Market. How many apples did the farmer take to the Farmer's Market? Estimate first. Then solve any way you choose.
1,126 apples; Sample answer: About 1,000 apples; $3,978 + 2,004 = 5,982$ apples, $5,982 - 4,856 = 1,126$ apples

10. Find the sum.
 $1,550 + 2,325 = ?$

Ⓐ 3,975

Ⓑ 3,875

Ⓒ 3,855

Ⓓ 3,275

11. Find the difference.
 $9,235 - 6,120 = ?$

Ⓐ 3,015

Ⓑ 3,105

Ⓒ 3,115

Ⓓ 3,215

Item Analysis: Additional Practice

Item	DOK	TEKS	
		Content	Process
1-3, 10-11	1	4.4A	
4-5, 8	1	4.4A	
6-7	2	4.4A	4.1F
9	3	4.4A	

A Big Spill

KEY CONCEPTS

Mathematics Objective Use number sense to subtract across zeros.

Language Objective Explain predictions and solutions for real-world problems in writing and verbally.

Essential Understanding Many real-world problems can be represented with a mathematical model, but that model may not represent a real-world situation exactly.

COHERENCE

Look Back Earlier in the topic, students learned to add and subtract greater numbers.

This Lesson In this lesson, students solve a real-world problem by employing their understanding of subtraction.

Look Ahead In later topics, students will use strategies to multiply and divide multi-digit numbers.

BALANCE

Conceptual Understanding Students draw on their conceptual understanding of subtraction.

Application Students use math they know to solve a real-world problem.

Reinforce Vocabulary

model

Materials

Provide manipulatives and other tools that students request.



Teacher Resources

Available at
Savvas Realize®



Editable Lesson Plan



enVision on the Go: Planning Support

 Texas Essential Knowledge and Skills (TEKS)**Mathematical Process Standards**

The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

4.1B use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.

4.1A apply mathematics to problems arising in everyday life, society, and the workplace.

4.1D communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

4.1E create and use representations to organize, record, and communicate mathematical ideas.

4.1F analyze mathematical relationships to connect and communicate mathematical ideas.

4.1G display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:

4.4A* add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.

4.4B determine products of a number and 10 or 100 using properties of operation and place value understandings.

4.4G round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers.

*Readiness Standard

Act 1 The Hook



10-15 min

Act 1

Name _____

A Big Spill

I can ... model with math to solve a problem that involves subtraction.

Mathematical Process Standards 4.1B The student is expected to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Also 4.1A, 4.1D, 4.1E, 4.1F, 4.1G TEKS 4.4A, 4.4B, 4.4G

Lesson 2-9

ACT 1



ACT 1

- 1. Apply Math** What do you notice? What do you wonder?
Sample answer: How many pieces of candy were in the container at the start?, How many pieces spilled?, How many pieces remain in the container?
- 2.** Predict a reasonable answer to the Main Question. Explain your prediction.
Students will predict a range of numbers.
Check students' explanations.

Copyright © Savvas Learning Company LLC. All Rights Reserved. Lesson 2-9 **67**

Students are tasked with determining how many pieces of candy spilled from a container given information about the number of pieces in the full container and the number of pieces that remained in the container after the spill.

Play the Video **WHOLE CLASS**

Take advantage of your students' initial reactions to watching the video. Ask: *What do you notice about the video? What do you wonder?*

Brainstorm Questions **WHOLE CLASS**

Item 1 Apply Math Encourage students to share their questions in a class discussion. Record their questions and store them for later. Listen for interesting mathematical and *non*-mathematical questions.

To help students work on posing interesting, mathematical problems, ask: *Which question do you find most interesting? Which questions could we use mathematics to answer?*

Pose the Main Question **WHOLE CLASS**

Use the Main Question screen in Act 1 to pose the problem situation students will be tasked with modeling and solving.

Main Question

How many pieces of candy spilled?

Make Predictions **INDIVIDUAL**

Item 2 Before reading, students should use pre-reading strategies. If needed, replay the video and discuss the visuals. Focus on items that may assist in making predictions. Point out that the prediction is only an estimate for the number of pieces that spilled. Do not give students time to make calculations.

Ask About Predictions **WHOLE CLASS**

Analyze You can survey the class for a range of predictions. Point out that, without any information, you expect a wide range of predictions. Ask: *Why do you think your prediction is the answer to the Main Question? Who has a similar prediction? How many of you agree with that prediction? Who has a different prediction?*

Make sure students understand it is equally important to think about unreasonable predictions to the Main Question. Ask: *What is a number too small to be the number of pieces that spilled? What number is too big?*

Lesson 2-9 **67**

Act 2 The Model



20-30 min

Act 2

ACT 2

3. What information do you need to answer the Main Question?

Sample answer: The number of pieces of candy in the full container, The number of pieces that remained after the spill.

Build G.R.I.T.
Trust yourself.

4. **Plan** Show how you can find the answer to the Main Question.

Check students' work. See sample solutions.

ACT 3

5. What is the answer shown in the video?

1,448 pieces

6. **Check** Does your answer match the Act 3 video? If not, what is one reason that could explain the difference?

Sample answer: Yes, I used a subtraction algorithm.

68 Lesson 2-9

Copyright © Savvas Learning Company LLC. All Rights Reserved.

Sample Student Work

$$\begin{array}{r} 491 \\ 1,500 \\ - \quad 52 \\ \hline 1,448 \end{array}$$

1,448 pieces spilled

Tanji's Work

Tanji used a subtraction algorithm to solve.

Maria's Work

Maria used number sense to determine that the amount spilled had to be 1,400 plus more.

52 is less than 100, so there are $1,500 - 100 = 1,400$ pieces plus some more that spilled.

$$52 + 48 = 100$$

$$1,400 + 48 = 1,448$$

1,448 pieces spilled

68 Lesson 2-9

Identify Important Information WHOLE CLASS

Item 3 Before showing any information, give students time to think about what quantities are relevant to the problem situation. Ask: **What information do you need to answer the Main Question?** I will only give you the information you ask for.

Connect After discussing what information would be useful, ask: **How could you get that information? How would you use it once you have it?** You can also have students complete the sentence frame "If I knew _____, then I could figure out _____."

Reveal the Information WHOLE CLASS

Use the Image Gallery screen in Act 2 to reveal each piece of information. Record information as students identify it and keep the information where students can refer to it. Have students discuss whether this information matches their expectations.

- Container at start had 1,500 pieces
- Container after spill has 52 pieces

Develop a Model SMALL GROUP

Item 4 Plan To support productive struggle, observe. If needed, ask guiding questions that elicit thinking. **How can you determine the number of pieces of candy that spilled?** [Subtract the number remaining from the number at the start.] **How can you subtract across zeros?** [Regroup place values]

Share Solution Strategies WHOLE CLASS

Communicate Have students share their solution methods. If needed, use the student work shown in Act 2, also shown here. Ask: **Does Tanji's strategy make sense? How did Maria use number sense to help solve?**

Act 3 The Solution

15-30 min

Act 3

Use the Video to Reveal the Answer

WHOLE CLASS

Item 5 The Act 3 video shows how to determine the number of pieces that spilled. Have students record this real-world answer. To support the connection between variability and mathematical modeling, ask: *Why does our class have a variety of answers, and the video has only one answer? Why are some predictions closer to the answer in the video than others?*

Main Question Answer

1,448 pieces

Validate Conclusions

SMALL GROUP

Item 6 Check Encourage students to discuss possible sources of error involved in using math to model this real-world situation. Accept a model as useful even if it is not perfect. Use the Answer screen in Act 3 to ask: *How useful was your model at predicting the answer? Would you change your model after watching the video? How would you change it?*

Explain You can also use the following question to test students' understanding of the real-world situation. *What is one way you might estimate the number of pieces that spilled?* [Use rounding.]

Reflect on Thinking

WHOLE CLASS

If time allows, ask students the following questions to discuss how they incorporated math processes during the task.

Represent Explain how you used math to represent the situation. How did doing that help you answer the Main Question?

Explain Explain how you can subtract across zeros.

Check How might you analyze and evaluate the efficiency of the approach you chose to solve the problem?

Create a Problem

INDIVIDUAL

Have students create a problem. Write your own problem related to the video in Act 1. Include any additional information needed to solve your problem. Explain how you would use math to solve your problem. Then solve your problem. Remind students that they could use a question they came up with in Act 1.

How can you use rounding and place value to subtract 53 from 1,500?

I can round 53 to 50.

I could write 1,500 in expanded form, then regroup.

1,500 is 1 thousand + 5 hundreds

1,500 is 1 thousand + 4 hundreds + 10 tens

50 is 5 tens.

10 tens - 5 tens = 5 tens

So, $1,500 - 50$ is equal to 1 thousand + 4 hundreds + 50 tens or 1,450.

$1,500 - 53$ is about 1,450.