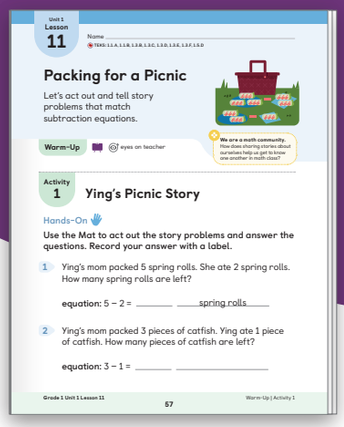
Unit 1
Lesson
11

Student Edition pages and Presentation Screens support learning in this lesson.


Unit 1 Lesson 11

Name

Packing for a Picnic

Let's act out and tell story problems that match subtraction equations.

Warm-Up

We are a math community. How does sharing stories about ourselves help us get to know one another in math class?

Activity 1 Ying's Picnic Story

Hands-On

Use the Mat to act out the story problems and answer the questions. Record your answer with a label.

1 Ying's mom packed 5 spring rolls. She ate 2 spring rolls. How many spring rolls are left?

equation: 5 − 2 = ____ ____ spring rolls

2 Ying's mom packed 3 pieces of catfish. Ying ate 1 piece of catfish. How many pieces of catfish are left?

equation: 3 − 1 = ____ ____

Grade 1 Unit 1 Lesson 11 57 Warm-Up | Activity 1

Packing for a Picnic

Generating Subtraction Stories from Equations

Let's act out and tell story problems that match subtraction equations.

Key Concepts

Today's Goals

1. **Goal:** Represent and solve subtraction story problems.
2. **Language Goal:** Tell story problems that match subtraction equations. **(Listening and Speaking)** ELPS 1.E, 2.E

Connections and Coherence

Students interpret and tell subtraction story problems, relating them to equations, to reason about the relationship between the minuend, subtrahend, and **difference**. They use objects to act out and solve subtraction story problems and discuss what subtraction equation could represent one of the problems. Students tell their own story problems that match given subtraction equations and act out the problems. Although this is the first time students find differences in Grade 1, the focus of this lesson is on making sense of subtraction equations rather than on the strategies students use to find differences. **(TEKS 1.1.A, 1.1.B)**

Prior Learning

In Lesson 7, students interpreted and told addition story problems and related them to expressions. In Kindergarten, students represented and solved *Take From, Result Unknown* story problems.

Future Learning

In Lesson 12, students will make and test out conjectures about subtracting 1 from a number by making connections between subtracting and counting back.

Integrating Rigor in Student Thinking

- Students develop their **conceptual understanding** of subtraction by connecting subtraction equations to contexts.
- Students **apply** their knowledge of subtraction to represent and create subtraction story problems.

Vocabulary

New Vocabulary

difference

Review Vocabulary

equation

subtract

TEKS

Addressing

1.3.F

Generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20.

Also Addressing: **1.3.B, 1.3.C, 1.3.D, 1.3.E, 1.5.D**

Math Process Standards: 1.1.A, 1.1.B, 1.1.C, 1.1.D

ELPS: 1.C, 1.D, 1.E, 1.F, 2.C, 2.D, 2.E, 2.F, 3.A, 3.D, 3.E, 3.F, 3.G, 3.H

Building On	Building Toward
K.3.C	**2.4.A**
K.3.A	

Building Math Identity

We are a math community.
How does sharing stories about ourselves help us to get to know one another in math class?

Invite students to reflect on this question as they complete this lesson

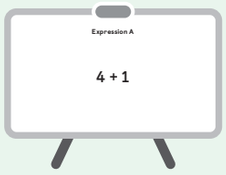
Lesson at a Glance 60 min

TEKS: 1.1.A, 1.1.B, 1.1.C, 1.1.D, 1.3.B, 1.3.C, 1.3.D, 1.3.E, 1.3.F, 1.5.D

Warm-Up Fluency

Whole Class | 10 min

Students are introduced to the **Number Talk** routine, in which they are presented with a sequence of problems that encourages them to look for structure, use repeated reasoning, and consider and build on each other's strategies. **(TEKS 1.1.C, 1.1.D)**



Activity 1

Pairs | 15 min

Students represent and solve subtraction story problems about Ying's picnic at the lake. They use connecting cubes and a Story Mat to represent the problems. Students are introduced to the term **difference** in the Connect.

Manipulative Kit: connecting cubes
Materials: Activities 1 & 2 PDF

Activity 2

Pairs | 15 min

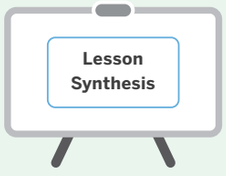
Students tell their partner a story problem based on a given subtraction equation. The partner uses connecting cubes and a Story Mat to act out the problem. Students make connections between equations, concrete representations, and contexts.

Manipulative Kit: connecting cubes
Materials: Activities 1 & 2 PDF, Activity 2 PDF
Additional Prep Cut out: Activity 2 PDF

Synthesis

Whole Class | 5 min

Students review and reflect on the connections between subtraction story problems, representations, and equations.

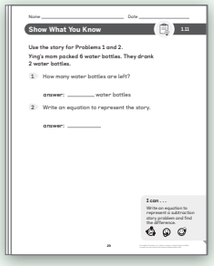


Show What You Know (optional)

Independent | 5 min

Students demonstrate their understanding by writing an equation to match a story.

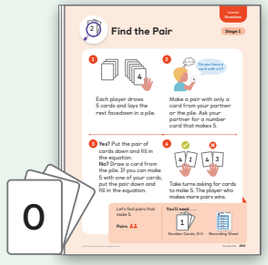
Materials: *Show What You Know* PDF



Center

Pairs | 15 min

Students are introduced to the Center, *Find the Pair, Make 10*, in which each partner chooses a number card and asks the other for a number that would make 10 with that card. They record each match with an equation.



Math Language Development

EB Emergent Bilinguals

Consider using the *Math Language Development Resources* with **Activity 2, Monitor** to support math language acquisition.

- ✓ Cognates
- ✓ Visuals
- ✓ Sentence frames and word bank

ELPS 1.B, 1.E, 2.B, 2.C, 2.D, 2.E, 2.F

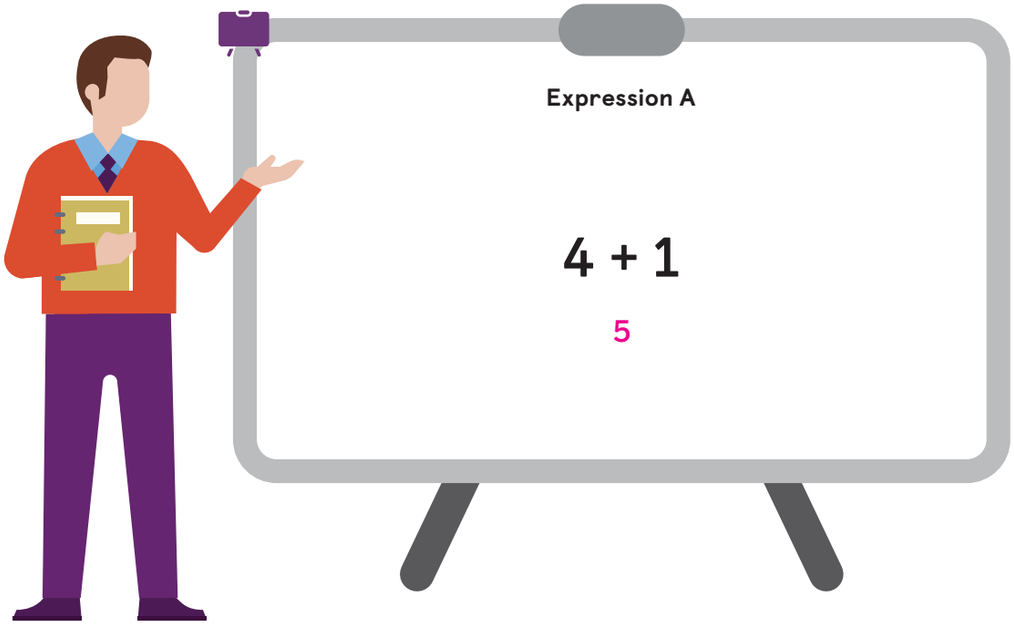
Pre-Production	Beginning	Intermediate	High Intermediate	Advanced
Students **listen** to spoken English and **respond** using their primary languages and gestures.	Students **listen** to spoken English and **speak** using their primary languages, gestures, and single words or short phrases.	Students **listen** to spoken English and **speak** using short phrases or simple sentences.	Students **listen** to spoken English and **speak** using a variety of sentence types.	Students **listen** to spoken English and **speak** using longer sentences. Exemplar responses are provided.

Whole Class | 10 min

Presentation Screen

Warm-Up Number Talk Fluency

Purpose: Students add 1 and 2 to a number to make connections between the facts for 1 and the facts for 2 and to develop fluency when adding 2.



Expression B

4 + 2

6

Expression C

6 + 2

8

Expression D

2 + 7

9

Why these problems? These expressions lend themselves to using a known $n + 1$ fact to find the sum of $n + 2$.

1 Launch

Use the Number Talk routine.

Display 1 expression at a time.

Say, "Take your time to find the value mentally. Give me a signal when you have an answer and can explain how you found it."

2 Connect

Record sums and 2 or 3 strategies as students share, honoring all strategies and keeping expressions and work displayed.

Repeat with each expression, spending the most time discussing Expressions C and D.

Ask, "How does knowing how to add 1 to a number help you to add 2?"

Students might say . . . ELPS 2.C, 2.D, 2.E

A: *I know 1 more than 4 is 5.*

B: *Because I know 1 more than 4 is 5, I can count 1 more again to get 6.*

C: *I know 6 + 1 is 7. Then I added 1 more to get 8.*

D: *I know 1 + 7 is 8. Then I added 1 more to get 9.*

Pairs | 15 min

Activity 1 Ying's Picnic Story

Purpose: Students represent and solve subtraction story problems with objects to make sense of the problems and develop their understanding of subtraction.

Presentation Screens

Materials

Lesson Resources:

- Distribute one Activities 1 & 2 PDF to each pair.

Manipulative Kit:

- Distribute 10 connecting cubes to each pair.

1 Launch

Display the Story Mat.

Say, "Today, you will use connecting cubes and a Story Mat to represent and solve problems about Ying's picnic at the lake."

EB **Emergent Bilinguals:** Invite students to share what they know about picnics to connect to prior background knowledge as a pre-reading strategy. ELPS 3.E

MLR **MLR6: Three Reads** ELPS 1.E, 2.F, 3.A, 3.E, 3.F, 3.G, 3.H

Use this support to help build reading fluency. Read aloud Problem 1 with students 3 times. To demonstrate listening comprehension, ask these questions.

- **Read 1:** Ask, "What is this story about?"
- **Read 2:** Ask, "What amounts do you know?"
- **Read 3:** Ask, "What amounts are you trying to find? How can you use the connecting cubes to solve the story problem?" Have students work in pairs for 2–3 minutes to solve the problem. Repeat the routine for Problem 2.

2 Monitor

After students have completed **Problem 1**, refer to the D **Differentiation | Teacher Moves** table on the following page.

If students need help getting started . . .

- Read aloud the first 2 sentences of the problem again, but replace the numbers with the word *some*. Ask, "What is happening in the story?"
- Read aloud the first sentence of the problem, pausing to let students act it out.

3 Connect

Display Problem 1 and the Story Mat.

Invite a student to share how they represented and solved the story problem. Select a response as shown in Row 3 in the *Differentiation* table.

Ask:

- "What subtraction expression represents this story?" Record the equation 5 – 2 = 3.
- "What does each number in this equation represent?"
- "What does the minus sign in this equation represent?"
- "How did the connecting cubes help you solve the story problem?"

Say (by moving the cubes to take away 2 cubes), "When you subtract, or take away, the number of cubes for spring rolls Ying's mom ate from the number of cubes for spring rolls she packed, you find the number of spring rolls that are left. The number that is left when 1 number is subtracted from another number is called the **difference**."

Key Takeaway: Say, "You can represent a subtraction story problem with objects and an equation to help you understand the story and find the difference."

Student Edition

Unit 1
Lesson
11

Name _____

TEKS: 1.1.A, 1.1.B, 1.3.B, 1.3.C, 1.3.D, 1.3.E, 1.3.F, 1.5.D

Packing for a Picnic

Let's act out and tell story problems that match subtraction equations.

Warm-Up eyes on teacher

We are a math community. How does sharing stories about ourselves help us get to know one another in math class?

Activity
1

Ying's Picnic Story

Hands-On

Use the Mat and connecting cubes to act out the story problems and answer the questions. Record your answer with a label.

1 Ying's mom packed 5 spring rolls. She ate 2 spring rolls. How many spring rolls are left?

equation: 5 − 2 = 3 spring rolls

2 Ying's mom packed 3 pieces of catfish. Ying ate 1 piece of catfish. How many pieces of catfish are left?

equation: 3 − 1 = 2 pieces

Grade 1 Unit 1 Lesson 11 Warm-Up | Activity 1

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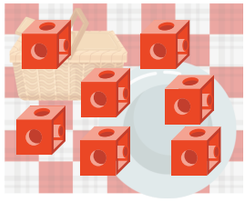
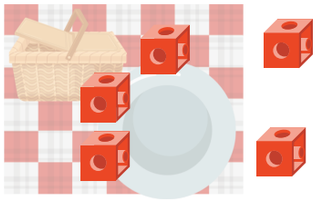
Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Show addition with the cubes and name the sum as the answer.	 There are 7 spring rolls.	**Support** Ask, "Which part of your representation shows how many spring rolls Ying's mom packed? Which part of your representation shows how many spring rolls were left after she ate 2?"
Almost there Model subtraction with the cubes and name the subtrahend as the answer.	 There are 2 spring rolls.	
Model subtraction with the cubes and name the difference as the answer.	 There are 3 spring rolls.	**Stretch** Ask, "How is using a Story Mat and cubes to represent subtraction alike or different from representing addition?"

Pairs | 15 min

Activity 2 Your Subtraction Stories

Purpose: Students apply their understanding of subtraction to tell subtraction story problems that match equations and find the differences.

Presentation Screens

Materials

Lesson Resources:

- Ensure that each pair has one copy of the Activities 1 & 2 PDF.
- Distribute one set of the pre-cut cards from the Activity 2 PDF to each pair.

Manipulative Kit:

- Ensure that each pair has 10 connecting cubes.

Short on time? Consider having partners create 1 story problem and find the difference together.

1 Launch

Display the Activities 1 & 2 PDF.

Say, "You will tell your own subtraction story problems about a picnic."

Ask, "What food would you want to eat at a picnic?"

Say, "First, you will select an equation card, making sure your partner does not see it. Then you will tell your partner a story problem that matches the subtraction equation on the card. Your partner will represent your story problem with cubes on the mat. Then, show the equation on the card to your partner. Your partner will tell you whether your story problem matches the equation and what the difference is."

Read aloud the directions.

Say, "Take turns selecting cards and telling story problems."

2 Monitor

While students complete the activity, refer to the D **Differentiation | Teacher Moves** table on the following page.

If students need help getting started . . .

- Ask, "What is your partner's story problem about?"
- Ask, "Which part of the story problem will you represent first with cubes?"

A **Accessibility: Conceptual processing** Clarify vocabulary by displaying the term and definition of *difference*, along with examples from Activity 1.

3 Connect

Invite pairs of students to share 2 or 3 story problems they created. Consider inviting students to act out the story problems on their story mats as pairs share.

Use the Think-Pair-Share routine. Ask:

- "What equation matches this story problem? How do you know?"
- "What is the difference?"

Repeat for each story problem.

MLR **MLR8: Discussion Supports — Pressing for Details** ELPS 2.E

As students share how their story matches the expression, press for increasing detail and specificity in their responses, such as specific information from the story problem and equation. For example:

- If a student says, "The story problem uses the same numbers as the equation." . . .
- Press for details by asking, "What part of the story shows the starting amount? What part of the story shows the amount that is taken away?"

Key Takeaway: Say, "You can tell your own subtraction story problem about an equation and then use objects to help you find the difference."

Student Edition

Activity 2

Name _____

Your Subtraction Stories

Hands-On

Use the Mat and connecting cubes to act out the story problems.

3 Discuss

Listen to your partner's story problem. Tell your partner if you think their story problem matches the equation.

- Your story problem matches the equation because _____.
- Your story problem does not match the equation because _____.
- The **difference** in your story problem is _____.

Oral activity: No writing expected. Sample response shown.

Your story problem matches the equation because you said there were 4 sandwiches and we ate 1, and your equation was 4 – 1 = 3.
The difference in your story problem is 3.

Grade 1 Unit 1 Lesson 11 58 Activity 2

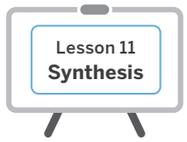
Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Tell an addition story using the numbers from the equation.	*They had 5 plums and then Ying's mom put 2 more in the basket.*	**Support** Ask "Your story problem matches 5 + 2 = 7. Now, tell a story problem that matches 5 – 2 = 3."
Almost there Tell a subtraction story that represents the numbers in the equation in the reverse order.	*There were 2 plums. Then Ying and her mom ate 5 of them.*	**Support** Ask, "Look at the numbers in the equation. How many plums should Ying and her mom start with?"
Tell a subtraction story that represents the equation.	*Ying's mom packed 5 plums. They ate 2 of them.*	**Stretch** Ask, "Can 1 subtraction equation match more than 1 story? Can 1 story match more than 1 subtraction equation? How do you know?"

Whole Class | 5 min

Presentation Screen



Synthesis

Lesson Takeaway: Subtraction can be represented with stories, objects, pictures, and equations.

Play the animation. ELPS 1.F

Ask:

- "What subtraction story problem could these cubes represent?"
- "What subtraction expression represents the story problem and the cubes?"

Record the expression 5 – 2.

Say, "Subtraction can be represented with story problems, objects, pictures and expressions. You can represent a subtraction story problem with a subtraction expression before solving it. Then you can find the difference and represent the story problem with an equation."

Formalize vocabulary: The **difference** is the number that is left when one number is subtracted from another.

(optional) **Consider using the Word Connections: Words With Multiple Meanings routine** with the term *difference*. Use the *Words With Multiple Meanings* PDF from the *Math Language Development Resources* to invite students to draw a picture or write in words the math meaning and another meaning of the term. ELPS 1.D, 3.D, 3.E

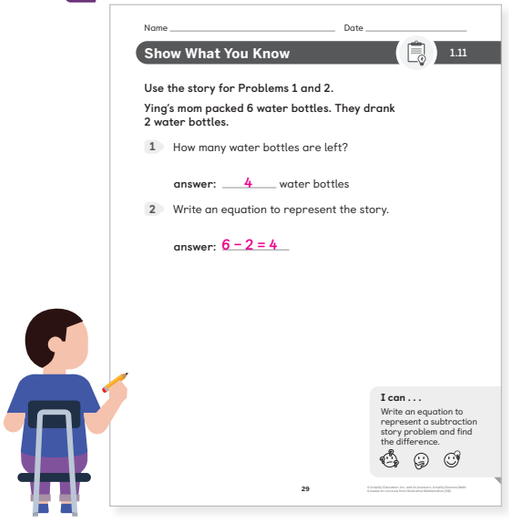
Refer to the *Math Language Development Resources* for a description of this routine and for more vocabulary support.

Invite students to refer to the **Summary** during Practice or anytime during the year.

Show What You Know (Optional)

Independent | 5 min

Show What You Know PDF


Name _____ Date _____

Show What You Know 1.11

Use the story for Problems 1 and 2.

Ying's mom packed 6 water bottles. They drank 2 water bottles.

1 How many water bottles are left?

answer: 4 water bottles

2 Write an equation to represent the story.

answer: 6 – 2 = 4

I can . . .
Write an equation to represent a subtraction story problem and find the difference.

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Today's Goals

1. **Goal:** Represent and solve subtraction story problems.
   - In Problems 1 and 2 in the *Show What You Know*, students wrote an equation and found the difference.
2. **Language Goal:** Tell story problems that match subtraction equations. **(Listening and Speaking)** ELPS 1.E, 2.E

D **Differentiation** See the last page of the lesson for differentiation and Math Language Development support.

Practice

Independent

Provide students with sufficient practice to build and reinforce their conceptual understanding, fluency, and application of mathematical topics, assessment practice, and ongoing spiral review.

Students using print

Summary 1.11

Subtraction can be represented with stories, objects, pictures, and equations.

Ying packed 5 apples for the picnic.
She gave 2 apples to a friend.
How many apples were left?
equation: 5 − 2 = 3
The difference is 3.

difference The amount you get when you subtract one number from another.

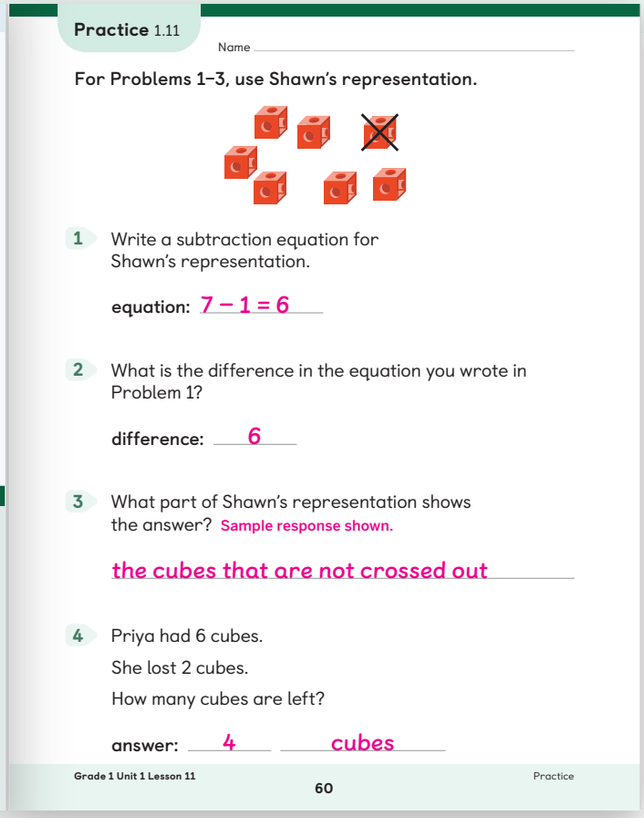
Practice 1.11

You'll play this Center.

Find the Pair Make 10

Let's find pairs that make 10.

Grade 1 Unit 1 Lesson 11 59 Summary | Practice



Practice 1.11

Name

For Problems 1–3, use Shawn's representation.

1 Write a subtraction equation for Shawn's representation.

equation: 7 − 1 = 6

2 What is the difference in the equation you wrote in Problem 1?

difference: 6

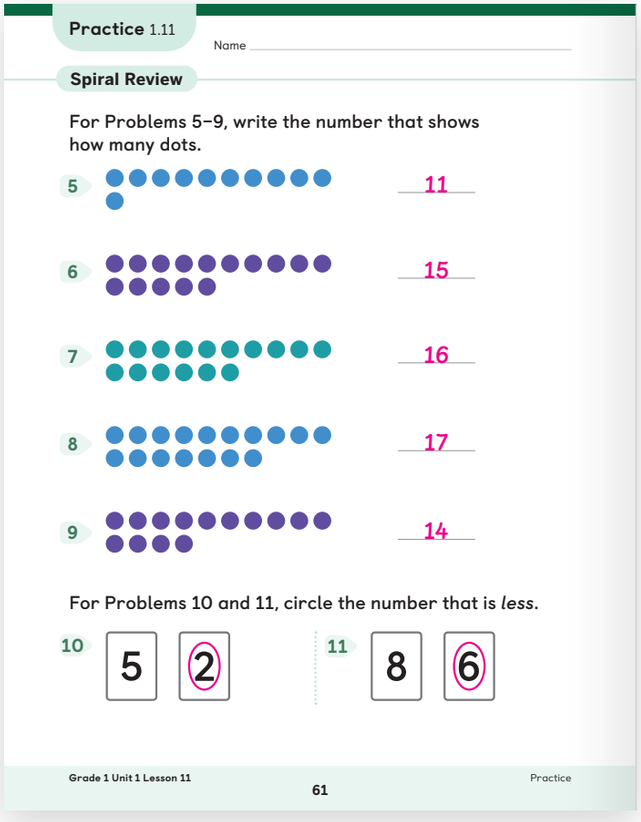
3 What part of Shawn's representation shows the answer? Sample response shown.

the cubes that are not crossed out

4 Priya had 6 cubes.
She lost 2 cubes.
How many cubes are left?

answer: 4 cubes

Grade 1 Unit 1 Lesson 11 60 Practice



Practice 1.11

Name

Spiral Review

For Problems 5–9, write the number that shows how many dots.

5 11

6 15

7 16

8 17

9 14

For Problems 10 and 11, circle the number that is *less*.

10 5 2

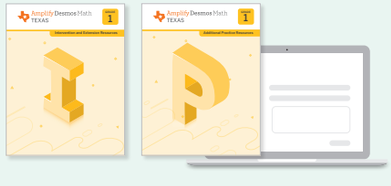
11 8 6

Grade 1 Unit 1 Lesson 11 61 Practice

Practice Problem Item Analysis

	Problem(s)	DOK	TEKS
On-Lesson			
	1	2	1.3.D
	2	1	1.3.D
	3	2	1.3.E
	4	2	1.3.D
Spiral Review			
Fluency	5–9	1	K.2.B, K.2.C
	10–11	1	K.2.H

Need more Practice?



Additional practice can be found in the **Practice Resources, Intervention and Extension Resources,** and online resources (item banks, Boost Personalized Learning, and Fluency Practice).

Pairs | 15 min

Introducing the Center
Find the Pair Fluency

Purpose: Students flip over a card and determine the other number needed to compose 10 to develop fluency with addition and subtraction within 10.

Presentation Screen

Materials

Manipulative Kit:

- Distribute two sets of number cards (0–10) to each pair.
- Provide students with access to 10-frames and two-color counters. (optional)

Centers Resources:

- Display the Directions and Recording Sheet.
- Distribute one Recording Sheet to each student.

Short on time? Consider reducing the number of rounds of play. Students return to this Center in a future Center Choice Time.

1 Launch

Display the Center materials, Directions, and Recording Sheet.

Demonstrate how to play *Find the Pair, Stage 2* by inviting a student to act as a partner. While demonstrating: ELPS 1.C

- **Say**, "You will play *Find the Pair* today."
- **Say**, "First, I will put all the cards in a pile facedown. Then each player takes 5 cards."
- **Say**, "I will choose one of my cards, and ask my partner for the number that would make 10 when added to my number."
- **Use the Think-Pair-Share routine.** Ask, "I have a card with a 6. What number should I ask for so that I could make 10?" Ask the student partner if there is a 4.
- **Say**, "If my partner says yes, I take their 4 card, place the pair of cards down, and fill in the equation on my Recording Sheet. If my partner says no, I draw another card from the pile."
- **Say**, "You will continue playing until 1 player is out of cards. The player with more pairs wins."

Provide access to 10-frames and two-color counters.

2 Monitor

Observe the strategies that students use to determine which number they need to make 10. Strategies may include counting on, keeping track with their fingers, using objects, or using known facts.

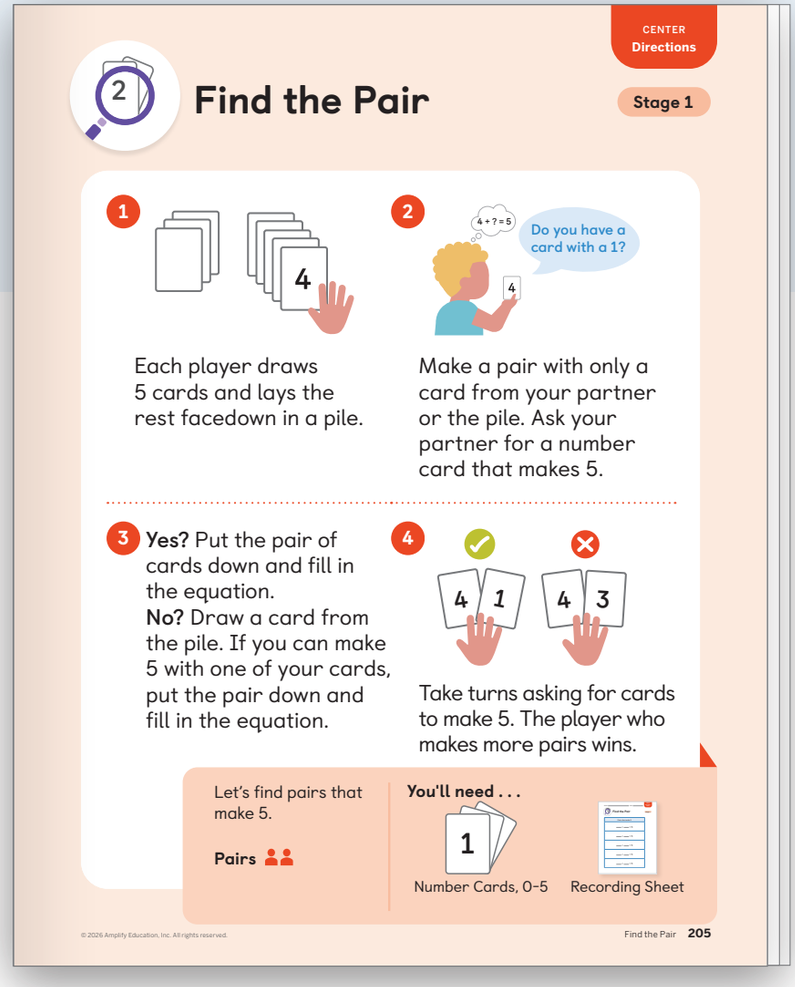
3 Connect

Display the 4 card.

Ask, "How could you find the number that you could add to 4 to make 10?"

Invite students to share their strategies. Select and sequence their responses in the order shown in the *Differentiation* table.

Key Takeaway: Say, "You can use counting or math tools, such as your fingers and 10-frames, to find the number that makes 10."



CENTER Directions

Stage 1

Find the Pair

1. Each player draws 5 cards and lays the rest facedown in a pile.

2. Make a pair with only a card from your partner or the pile. Ask your partner for a number card that makes 5.

3. **Yes?** Put the pair of cards down and fill in the equation.
No? Draw a card from the pile. If you can make 5 with one of your cards, put the pair down and fill in the equation.

4. Take turns asking for cards to make 5. The player who makes more pairs wins.

Let's find pairs that make 5.

Pairs

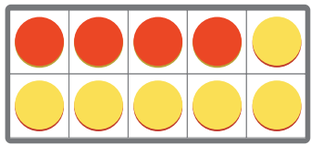
You'll need . . .

Number Cards, 0–5

Recording Sheet

Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Use a math tool, such as their fingers or 10-frames.	 *I have a 4. I see that I need 6 more to make 10. Do you have a 6?*	**Support** Ask, "How could you figure out the number that makes 10 without using a math tool?"
Use a counting strategy.	*I have a 4. I know I can count up to 10: 5, 6, 7, 8, 9, 10. I counted up 6. Do you have a 6?*	**Strengthen** Ask, "How could you figure out the number that makes 10 without counting?"
Use a known fact.	*I have a 4. I know 4 and 6 make 10. Do you have a 6?*	**Strengthen** Ask, "What other parts do you know that make 10?"

Differentiation Use after Lesson 11

Lesson Goal: Represent and solve subtraction story problems.

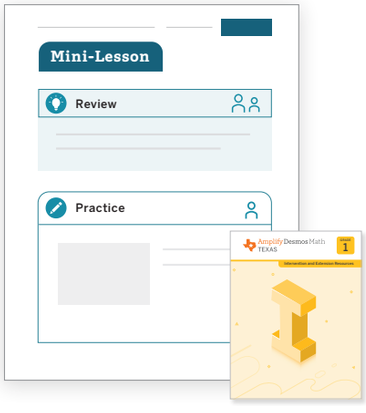
Support

Provide targeted intervention for students by using these resources.

If students represent subtraction story problems with an addition equation:

Respond:

- Assign the *Representing and Solving Subtraction Story Problems* Mini-Lesson. | 15 min
- Invite students to revisit and discuss questions from the Activity 1 Connect, helping them identify the meaning of subtraction equations



Strengthen

Reinforce students' understanding of the concepts assessed by using these resources.

If students represent subtraction story problems with an expression and find the answer:

Respond:

- Invite students to play these **Centers. |** 15 min
  Counting Collections: Sort and Count
  Shake and Spill:
  - ***Which Is More?***
  - *Represent*
- Have students complete **Lesson 11 Practice. |** 15 min
- **Item Bank**

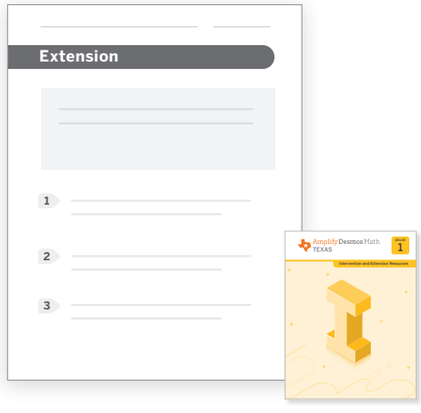
Stretch

Challenge students and extend their learning with these resources.

If students represent subtraction story problems with an equation that matches the story, and name the difference as the answer:

Respond:

- Invite students to explore the **Sub-Unit 2 Extension Activities. |** 15 min
- Revisit Activity 2 and invite students to respond to the **Stretch** question from the *Differentiation: Teacher Moves* table. | 5 min

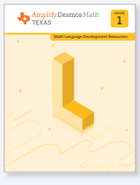


Support, *Strengthen*, and *Stretch* learning by assigning these digital resources that adjust to each student's current level of skill and understanding.
• **Boost Personalized Learning** • **Fluency Practice** • **Math Adventures**

Math Language Development

EB Use the **Math Language Development Resources** for further language support with all your students, including those building English proficiency.

- English/Spanish cognates, e.g., **difference / diferente**
- Frayer Model templates
- Vocabulary routines



Professional Learning

Reflect on how comfortable your students feel asking questions. What can you do to encourage students' curiosity and help them understand that asking questions is an important part of being a mathematician?