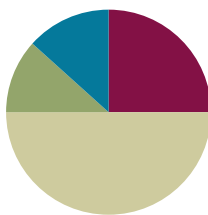# Lesson 25

Objective: Solve *add to with change unknown* math stories with addition and relate to subtraction. Model with materials, and write corresponding number sentences.

Suggested Lesson Structure

- ■ Fluency Practice   (15 minutes)
- ■ Application Problem   (7 minutes)
- ■ Concept Development   (30 minutes)
- ■ Student Debrief   (8 minutes)

    Total Time   **(60 minutes)**

Fluency Practice (15 minutes)

- ▪ Race to the Top: Doubles **1.OA.6**   (5 minutes)
- ▪ X-Ray Vision: Partners to 9 **1.OA.6**   (5 minutes)
- ▪ Number Bond Dash: 9 **1.OA.6**   (5 minutes)

Race to the Top: Doubles (5 minutes)

Materials: (S) Race to the Top (Fluency Template), crayons (or pencil), 1 die (replace 6 with 0) per pair

Note: Reviewing doubles permits students continued practice with the facts presented in Lesson 21.

Students take turns rolling a die. Their partner says the double fact and records it on the graph.

X-Ray Vision: Partners to 9 (5 minutes)

Materials: (T) 9 counters, container

Note: Reviewing partners to 9 allows students to gain and maintain fluency with addition and subtraction facts within 10.

1. Place 9 counters on the floor next to an opaque container.

2. Tell students to close their eyes. Put 1 counter in the container.

> **NOTES ON MULTIPLE MEANS OF REPRESENTATION:**
>
> Frequent checks for understanding benefit English language learners and other students who may shy away from asking questions. Ask questions for comprehension during this lesson to ensure that students understand the vocabulary and concept.

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3. Tell students to open their eyes. Ask, "Who can use their x-ray vision to make a number sentence combining the counters in and outside the container to make a number sentence?"

4. Continue the game, eliciting all partners to 9.

Number Bond Dash: 9 (5 minutes)

Materials: (T) Stopwatch or timer (S) Number Bond Dash 9 (Lesson 8 Fluency Template), marker to correct work

Note: By using the same system repeatedly, students can focus on the mathematics alone.

Follow the procedure for the Number Bond Dash in Lesson 5 Fluency Practice. Tell students to remember how many problems they get correct so they can try to improve their scores in Lesson 26.

Application Problem (7 minutes)

Taylor and her sister Reilly each got 4 books from the library. Then, Reilly went back in and checked out another book. How many books do Taylor and Reilly have together? Draw and label a number bond to show the part of the books Taylor took out and the part that Reilly took out. Write a statement to share your answer.

Note: This problem is designed as a bridge from the previous lesson's focus on fluency with facts within 10. This problem also allows students practice with a contextualized double and double plus 1 problem.
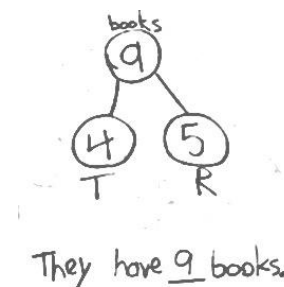
Concept Development (30 minutes)

Materials: (T) 10 bear counters, number bond and number sentences (Template) (S) Personal white board, number bond and number sentences (Template), 10 bear counters

Have students bring their personal boards to the meeting area and sit in a semi-circle. Project number bond and number sentences template on the board.

T: Once upon a time, 4 little bears went to play tag in the forest. Some more bears came over. In the end, there were 6 little bears playing tag in the woods. (Place 6 bear counters on the floor.)

T: How many more bears came to play? Turn and talk to a partner to share a strategy you used.

Review the strategy of counting on to solve. Ask students to write the number sentence (4 + 2 = 6) and the number bond. Circle the solution in both.

T: (Write the number sentence and the number bond on the board.)

> **NOTES ON
> MULTIPLE MEANS
> OF REPRESENTATION:**
>
> Post a written copy of the problem for students to consult as the two stories in this lesson are being read aloud. This will help visual learners, in particular, and all students follow along as the story is being told.

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T: What does 6 stand for?

S: The number of bears playing at the end.

T: (Gesture over the 6 bears on the floor.)

T: What does 4 stand for?

S: The number of bears playing in the beginning.

T: (Separate 4 bears slightly from the group.)

T: How many bears came over to play? Point to where you see them.

S: 2 bears. (Point to 2 bears.)

T: We can make an imaginary line with our finger to show the two parts. (Draw an imaginary line between the two groups.) Four bears were there first, and then 2 more bears came. (Point to each part accordingly.)

T: Many of you used addition to figure out how many bears came over to play. When we checked our work just now, we separated the 4 bears from the total group of 6 bears. (Write 4 + __ = 6 on the board.) Since we know the whole and one part, we can use subtraction to find the other part. Turn and talk to your partner about how we could write this as a subtraction sentence. (Circulate and listen.)

S: (Discuss.)

T: (Choose a student to demonstrate her subtraction sentence using the bears.)

T: We can write 6 – 4 = 2 to show that we had 6 bears and separated 4 of them from the group, leaving us with 2 bears for the unknown part. You write the subtraction sentence on your board as I write it.

S/T: (Write 6 – 4 = 2.)

T: Circle the answer to our question in the number sentence.

T: What number bond matches the parts and the total for this story? Add that to your board.

S/T: (Draw number bond of 4 and 2 with the total of 6.)

Tell the following story: Once upon a time, 8 bears were fishing for dinner. Five bears had been fishing all day. The rest of the bears came after lunch. How many bears came after lunch?

Have students solve and write an addition and subtraction number sentence along with a matching number bond.

Place 8 bears on the floor. Invite the students to share the number sentences and analyze the referents for each number. Emphasize that there are two parts within the total by drawing an imaginary line between them.

MP.8

T: Do both of your number sentences match the number bond?

S: Yes!

T: How are these number sentences the same? How are they different? Turn and talk to your partner.

S: Both number sentences gave us the answer. Three more bears came to fish. The first time, we used counting on and an addition sentence to solve. The second time, we used subtraction.

Distribute bear counters to each student. Repeat the process by telling other *change unknown* stories for students to solve using their counters. Be sure to have students separate one addend from the other.

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Consider using the following sequence: $5 + \underline{\quad} = 7$, $7 - 5 = \underline{\quad}$; $2 + \underline{\quad} = 8$, $8 - 2 = \underline{\quad}$, and $4 + \underline{\quad} = 9$, $9 - 4 = \underline{\quad}$.
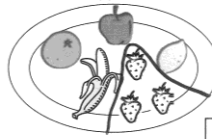
Problem Set (10 minutes)

Distribute the Problem Set, and guide the students through by reading each word problem and giving sufficient time to complete the task.

MP.7

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students solve these problems using the RDW approach used for Application Problems. On this Problem Set, all students should begin with Problem 1 and possibly leave Problem 4 to the end if they still have time.

Student Debrief (8 minutes)

Lesson Objective: Solve *add to with change unknown* math stories with addition and relate to subtraction. Model with materials, and write corresponding number sentences.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

You may choose to use any combination of the questions below to lead the discussion.

Ask students to bring a yellow colored pencil to the Debrief.
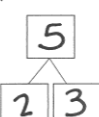
- With your yellow colored pencil, circle all the numbers that were the unknown in the number bond and in the number sentences. Where do they appear in the number bonds and the number sentences?

- How did the number bond help you come up with

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the addition and the related subtraction sentence?

▪ Look at Problem 4. Explain how the addition and subtraction sentences are related. How are addition and subtraction alike?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

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Name _____   Date _____

Break the total into parts. Write a number bond and addition and subtraction number sentences to match the story.

2 + 1 = 3

3 − 2 = 1

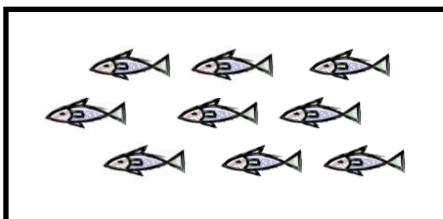1. Rachel and Lucy are playing with 5 trucks. If Rachel is playing with 2 of them, how many is Lucy playing with?

2 (+) $\square$ = 5

5 (−) 2 = $\square$
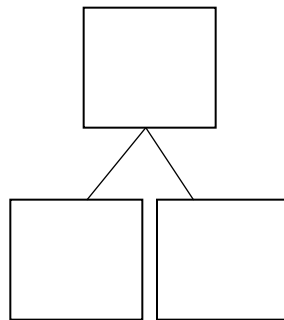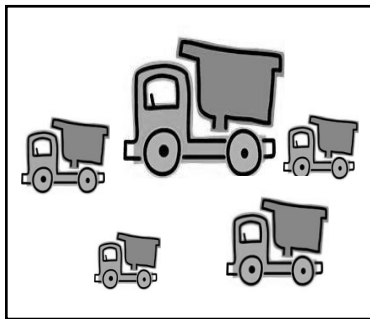
Lucy is playing with _____ trucks.

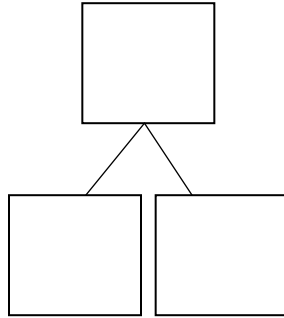2. Jane caught 9 fish. She caught 7 fish before she ate lunch. How many fish did she catch after lunch?
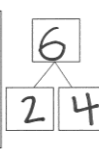
$\square$ (+) $\square$ = 9

9 (−) $\square$ = $\square$
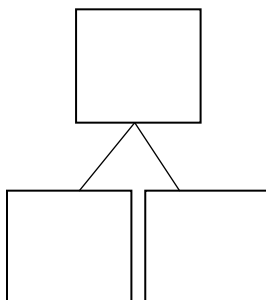
Jane caught _____ fish after lunch.

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3. Dad bought 6 shirts. The next day he returned some of them. Now, he has 2 shirts. How many shirts did Dad return?
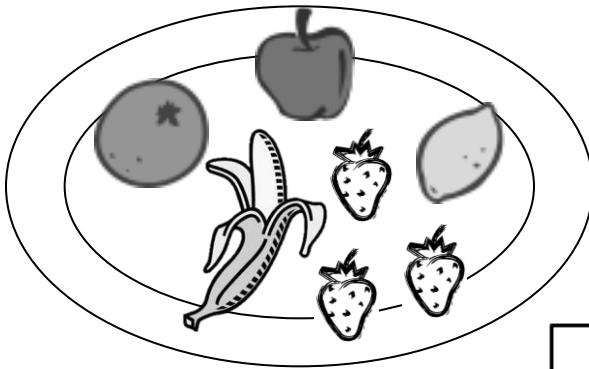
$$\square + \square = 6$$

$$6 - \square = \square$$

Dad returned _____ shirts.

4. John had 3 strawberries. Then, his friend gave him more fruit. Now, John has 7 pieces of fruit. How many pieces of fruit did John's friend give him?
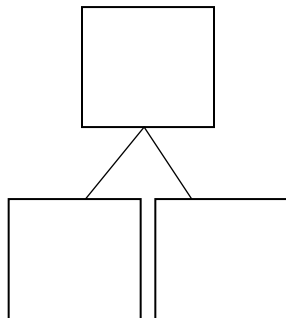
$$\square + \square = 7$$

$$7 - \square = \square$$

John's friend gave him _____ pieces of fruit.

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Name _____   Date _____

Solve the math story. Complete the number bond and number sentences. Color the unknown number yellow.

Rich bought 6 cans of soda on Monday.

He bought some more on Tuesday.

Now, he has 9 cans of soda.

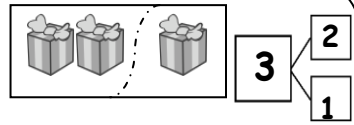How many cans did Rich buy on Tuesday?
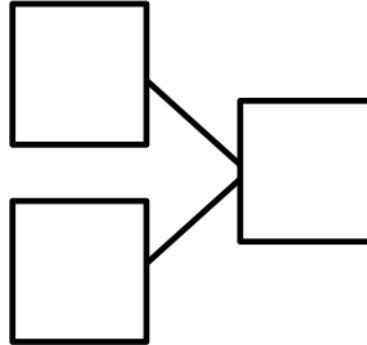
Rich bought _____ cans.

☐ (+) ☐ = ☐

☐ (-) ☐ = ☐

Name _____   Date _____

Break the total into parts. Write a number bond and addition and subtraction number sentences to match the story.

2 + 1 = 3

3 – 2 = 1

1. Six flowers bloomed on Monday. Some more bloomed on Tuesday. Now, there are 8 flowers. How many flowers bloomed on Tuesday?
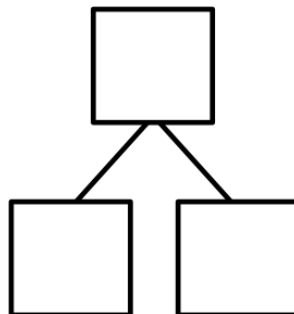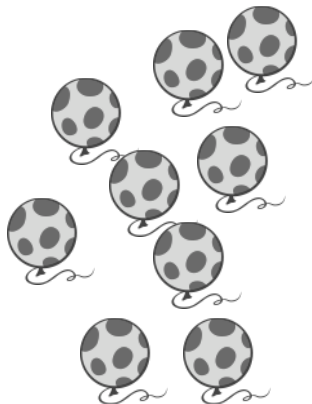
☐ (+) ☐ = ☐

☐ (-) ☐ = ☐
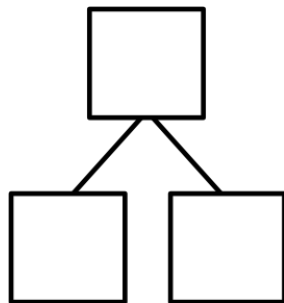
_____ flowers bloomed on Tuesday.

2. Below are the balloons that Mom bought. She bought 4 balloons for Bella, and the rest of the balloons were for Jim. How many balloons did she buy for Jim?
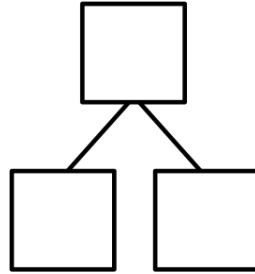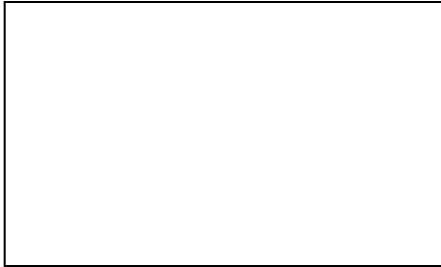
☐ (+) ☐ = ☐

☐ (-) ☐ = ☐

Mom bought Jim _____ balloons.

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Draw a picture to solve the math story.

3. Missy buys some cupcakes and 2 cookies. Now, she has 6 desserts. How many cupcakes did she buy?

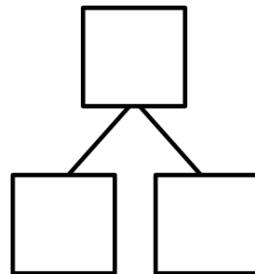Missy bought _____ cupcakes.

4. Jim invited 9 friends to his party. Three friends arrived late, but the rest came early. How many friends came early?
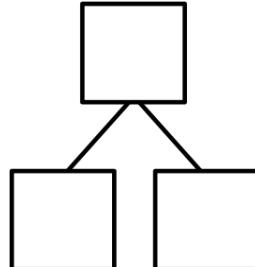
_____ friends came early.

5. Mom paints her fingernails on both hands. First, she paints 2 red. Then, she paints the rest pink. How many fingernails are pink?

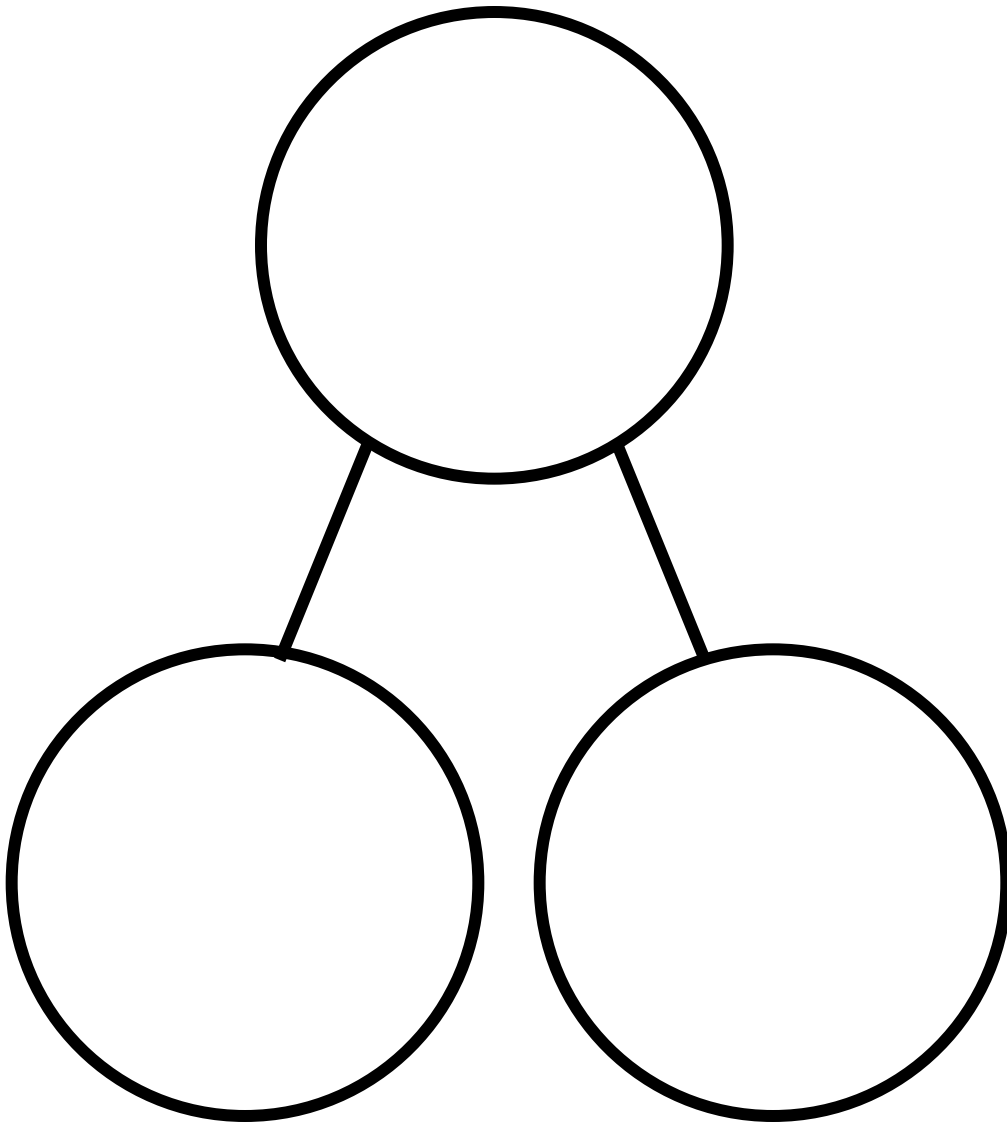Mom paints _____ fingernails pink.

1.G.12

Name _____   Date _____

Race to the Top!

0	**2**	**4**	**6**	**8**	**10**

engage^ny   **1.G.13**

number bond and number sentences