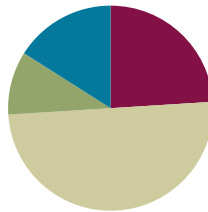


## Lesson 33

**Objective:** Solve *take from* equations with no unknown using numbers to 10.

### Suggested Lesson Structure

■ Fluency Practice	(12 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(25 minutes)
■ Student Debrief	(8 minutes)
<b>Total Time</b>	<b>(50 minutes)</b>



### Fluency Practice (12 minutes)

- Core Fluency Differentiated Practice Sets **K.OA.5** (5 minutes)
- 1, 2, 3, Sit on 10, 20, and 30 **K.CC.2** (4 minutes)
- Hide 1 **K.OA.1** (3 minutes)

### Core Fluency Differentiated Practice Sets (5 minutes)

Materials: (S) Core Fluency Practice Sets (Lesson 29 Core Fluency Practice Sets)

Note: This activity assesses students' progress toward mastery of the required fluency goal for kindergarten: Add and subtract within 5.

Distribute Practice Sets A, B, or C based on student performance in Lesson 30. Students who correctly answered all questions on a Practice Set in the previous attempt should move to the next Practice Set. All other students should try to improve their scores on Practice Set A.

Students complete as many problems as they can in 96 seconds. Assign a counting pattern and start number for early finishers, or have them play an independent game like the Make 10 Memory Game (Lesson 28). Collect and correct any Practice Sets completed within the allotted time.

### 1, 2, 3, Sit on 10, 20, and 30 (4 minutes)

Note: In this activity, students improve on rote counting to 30, a necessary skill for success in Module 5. Conduct the activity as described in Lesson 30, but now, continue to 30 if students are ready.

**Hide 1 (3 minutes)**

Materials: (T) Large 5-group cards (Lesson 12 Fluency Template 2)

Note: This activity prepares students to focus on subtraction in today’s lesson.

T: (Show the 3 dot card.) Raise your hand when you know how many dots. (Wait for all hands to go up, and then give the signal.) Ready?

S: 3.

T: Now, hide 1. You can use your hand to hide 1 of the dots from your eyes, or you can just see it in your mind. Now how many dots are left?

S: 2.

T: (Show the 4 dot card.) Raise your hand when you know how many dots. (Wait for all hands to go up, and then give the signal.) Ready?

S: 4.

T: Hide 1. (Wait.) How many dots are left?

S: 3.

Continue with the following suggested sequence: 5, 1, 6, 7, 8, 9, and 10.

**Application Problem (5 minutes)**

Materials: (S) 9 linking cubes and 1 construction paper “picnic blanket” (per pair), paper

You are going to play a game with your partner. Partner A, pretend your linking cubes are ants and your paper is a picnic blanket. Count your ants, and put them all on the picnic blanket.

Now, pretend some of the ants crawled off the blanket. Slide some of your ants off the blanket to show the ones that crawled away.

Partner B, your job is to make a number bond showing the 9 ants that were on the blanket, the ones that stayed, and the ones that crawled away. Partner A, check the number bond to see if you agree. Now it is Partner B’s turn to show some ants leaving the blanket!

Note: This is a concrete representation of today’s lesson and serves as an anticipatory set.



**NOTES ON  
MULTIPLE MEANS  
OF REPRESENTATION:**

For students working below grade level and students with disabilities who are still having difficulties with part–whole relationships, guide them step-by-step in making the number bond to represent the Application Problem. Pausing for student responses after each question, ask: “Where should you put the 9 ants? How many ants crawled off? Where should you put the 3 ants that crawled off?”

**Concept Development (25 minutes)**

Materials: (S) 9 teddy bears or other counters, 10 linking cubes, subtraction equation (Template), personal white board

**Problem 1**

T: (Write  $\underline{\quad} - \underline{\quad} = \underline{\quad}$ .) Let’s pretend you have a family of 9 bears. Put 9 bears in front of you. One bear is hungry and wants to go to the honey tree! Take 1 bear, and scoot him across your desk to show his adventure. 8 are left.

T: Help me make a number bond about the story. (Allow students to offer guidance in creating the number bond on the board.) Now we want to make a number sentence about this story. Are we adding more bears in this story or taking some away?

S: Taking away.

T: Yes, we need to make a take away, or subtraction, number sentence. What number would we put in the first blank?

S: How many we started with!  $\rightarrow 9$ .

T: What goes in the next blank?

S: The bear that went away.  $\rightarrow 1$ .

T: What should we put in the blank after the equal sign?

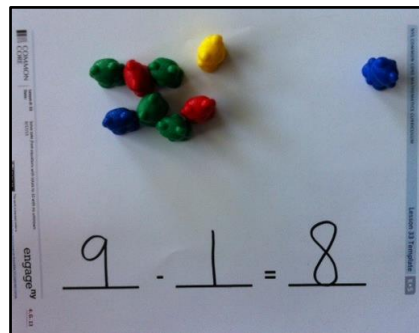
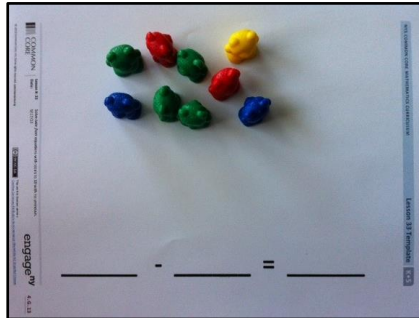
S: How many bears are still at home.  $\rightarrow 8$ .

T: Great! Let’s write our number sentence. Fill in the blanks on your personal white board, and read with me. (Demonstrate.)

S: 9 minus 1 is 8.  $\rightarrow 9$  take away 1 leaves 8.

T: Send your bear back home. Let’s pretend 2 bears are hungry this time. Send them to the forest. We need to write a new number sentence. What would we write this time? (Ask students to help fill in the blanks again, explaining why they chose each number.) Read the number sentence with me.

S:  $9 - 2 = 7$ .



MP.4

Continue with the activity several times, repeating the pattern through  $9 - 8$  and having students write and read the equation each time.

**Problem 2**

T: Put your bears away, and take out your linking cubes. How many do you have?

S: 10.

T: Let’s pretend your linking cubes are little cars. You have 10 cars. 9 of them drove away. 1 is left.



**NOTES ON MULTIPLE MEANS OF REPRESENTATION:**

Introduce unfamiliar words to English language learners by holding up a counting bear while saying *a family of bears* and showing pictures for *tree* and *forest*. This allows them to focus on the math and also expand their vocabulary, which in turn helps them explain their thinking during partner shares.

Slide 9 of your cars to the other side of the desk to show the ones that drove away. How would we write a number sentence about this story? Please help me fill in the blanks.

S: Put the 10 first to show how many we started with. → Next, write the 9 to show the ones that drove away. → Then, you put 1 to show the car that was left!

T: Great! Write the number sentence on your board, too! Read it with me.

S:  $10 - 9 = 1$ .

T: Put your 10 cars back together. This time, use your cubes to show that 8 cars drove away. How many are left?

S: There are still 2.

T: Let's all fill in the blanks for our new number sentence. (Allow students to offer guidance in creating the new equation, and have them re-create it on their boards.) Read with me.

S:  $10 - 8 = 2$ .

Continue activity through  $10 - 1$ , each time asking students to act out the story and write and read the number sentence.

**Problem 3**

T: Now, pretend your 10 linking cubes are trains in the station. Some of them drive away. With your partner, act out this story several times. Each time, write the new number sentence on your personal white board, and whisper-read it together. (Allow time for exploration and discussion. Circulate to check for accuracy in representing the equation.)

**Problem Set (10 minutes)**

Students should do their personal best to complete the Problem Set within the allotted time.

Note: The Problem Set does not specify whether students should cross off or hide to solve. At this point, students may select the strategy that works best for them. Provide suggestions about strategies for students who are struggling to represent subtraction using concrete or pictorial methods.

**Student Debrief (8 minutes)**

**Lesson Objective:** Solve *take from* equations with no unknown using numbers to 10.

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 Student Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.


Any combination of the questions below may be used to lead the discussion.

- Look at the first problem about the trains. How did you know how many trains were left? What do the 7 trains show? What do the 2 trains show? The 5?
- Look at the last problem about the planes. Compare your drawing with your partner’s. How are they alike? How are they different? Did you use the same strategy to find out how many planes are still in the air?
- How did you know where to put each number in your number sentences?
- How are subtraction number sentences different from addition sentences? Are there any ways in which they are similar? (Note: Using a number bond at this point in the Student Debrief can help students gently begin to see the relationships between addition and subtraction.)
- Look at the number bond you created for the ants during the Application Problem. Work with your partner to write a subtraction sentence to match.

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 33 Problem Set K•4

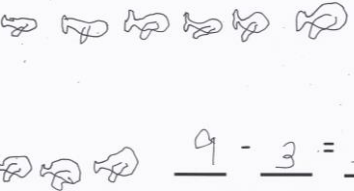
Draw the story. Fill in the number sentence to match.

The bus had 10 people. 5 people got off. Now there are 5 people left.



$10 - 5 = 5$

There were 9 planes in the sky. 3 planes landed. Now there are 6 planes in the sky.



$9 - 3 = 6$

COMMON CORE Lesson 33 Date: Solve take from equations with totals to 10 with no unknowns. 10/2/13 engage<sup>ny</sup> 4.G.7

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Name \_\_\_\_\_

Date \_\_\_\_\_

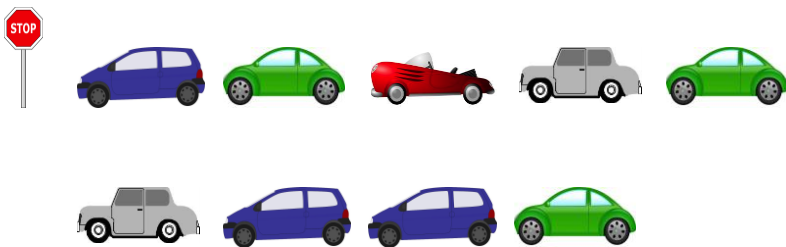
Fill in the number sentence to match the story.

There were 7 trains. 2 trains rolled away. Now there are 5 trains.



$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

There were 9 cars at the stop sign. 7 drove away. There are 2 cars left.



$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

There were 10 people. 6 people got on the bus. Now there are 4 people.



$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

Draw the story. Fill in the number sentence to match.

The bus had 10 people. 5 people got off. Now there are 5 people left.

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

There were 9 planes in the sky. 3 planes landed. Now there are 6 planes in the sky.

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

Name \_\_\_\_\_

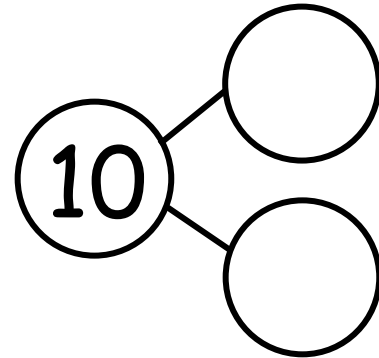
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Fill in the number sentence and the number bond.

There were 10 teddy bears. Cross out 2 bears. There are 8 bears left.



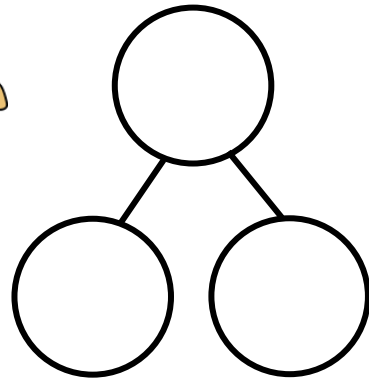
$$\underline{10} - \underline{\quad} = \underline{\quad}$$



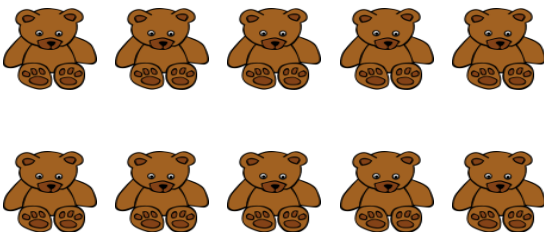
There were 10 teddy bears. Cross out 9. There is 1 left.



$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$



There were 10 teddy bears. Cross out 3. There are 7 bears left.



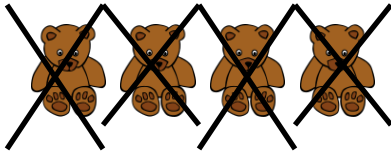
$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$



Draw a line from the picture to the number sentence it matches.



●  $10 - 1 = 9$



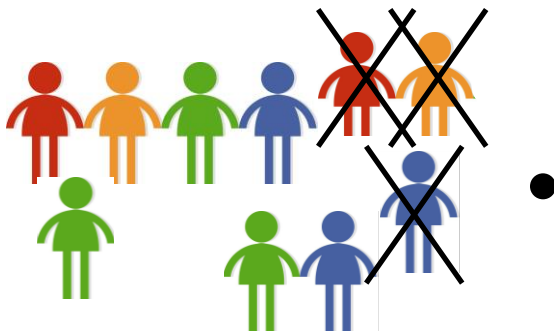
●  $10 - 3 = 7$



●  $9 - 4 = 5$



●  $9 - 8 = 1$



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subtraction equation