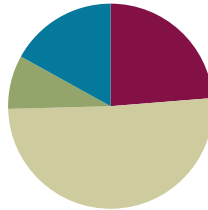


## Lesson 33

Objective: Model 0 less and 1 less pictorially and as subtraction number sentences.

### Suggested Lesson Structure

■ Fluency Practice	(15 minutes)
■ Application Problem	(5 minutes)
■ Concept Development	(30 minutes)
■ Student Debrief	(10 minutes)
<b>Total Time</b>	<b>(60 minutes)</b>



### Fluency Practice (15 minutes)

- Rekenrek Counting Within 20 **K.NBT.1** (3 minutes)
- Sprint: Addition **1.OA.6** (10 minutes)
- 0 Less, 1 Less **1.OA.5, 1.OA.6** (2 minutes)

### Rekenrek Counting Within 20 (3 minutes)

Materials: (T) Rekenrek

Note: Reviewing the Kindergarten standard **K.NBT.1** will prepare students for work with teen numbers in Module 2.

T: (Move the top 10 beads on the Rekenrek to the right). How many red beads do you see?

S: 5.

T: How many white beads do you see?

S: 5.

T: 5 and 5 make...?

S: 10.

T: Count the Say Ten way as I move the beads. (Move one bead at a time up to 2 tens and back down to 10.)

S: Ten 1, ten 2, ...ten 9, 2 tens, ten 9, ten 8, ...ten.

Work up and down from ten 1 to 2 tens, from ten 2 to ten 9, from ten 3 to ten 8, ten 4 to ten 7, and ten 5 to ten 6 and back out again.

**Sprint: Addition (10 minutes)**

Materials: (S) Addition Sprint

Note: This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10.

**0 Less, 1 Less (2 minutes)**

Ask questions to review subtraction language. Instruct students to answer on your signal.

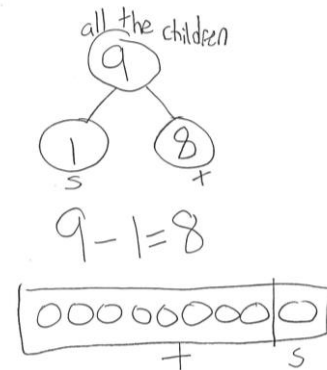
Note: This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10.

Suggested questions: What’s 1 less than 8? What comes before 6? 6 minus 0 equals...? 0 less than 9 is...? 9 is 1 less than...? 9 equals 10 minus...?

**Application Problem (5 minutes)**

Nine children are playing outside. One child is on the swings and the rest are playing tag. How many children are playing tag? Write a number bond and number sentence. Make a math drawing to show how you know.

Note: This problem provides an application of the Lesson 32 objective, solving unknown addends, as well as continuing to explore *1 less*, a segment of this lesson’s objective.



**Concept Development (30 minutes)**

Materials: (T) Number bracelet of 10, white board or easel (S) Number bracelet of 10 beads made with 5 red and 5 white beads (see Lesson 8), personal white board

Have students bring materials to meeting area and sit in a semi-circle.

- T: How many beads are on your number bracelet? (Hold up the bracelet.)
- S: 10 beads! (Hold up the bracelet.)
- T: Take 1 bead away.
- T/S: (Push 1 white bead away from the set, as shown.)



- T: How many beads do we have now?
- S: (Count the beads as needed.) 9 beads!
- T: Write a number sentence to show what we did.



**NOTES ON MULTIPLE MEANS OF REPRESENTATION:**

Integrating children’s literature, poetry, and songs reinforces and supports mathematical knowledge for English language learners. Some suggested titles are “10 Little Monkeys Jumping on the Bed” by Child’s Play and “Ten Sly Piranhas” by William Wise.

T/S: (Write  $10 - 1 = 9$ .)

T: Push that bead all the way up until it is hiding in your hand.

T/S: (Push the bead into the palm, as shown.)

T: We have 9 beads.



Repeat the process of taking 1 bead away and writing the new number sentence for the following suggested sequence:  $9 - 1$ ,  $8 - 1$ , and  $7 - 1$ .

T: Push your beads back, and open your pipe cleaner so that your beads are in a straight line.

T/S: (Adjust the beads and pipe cleaner as shown.)

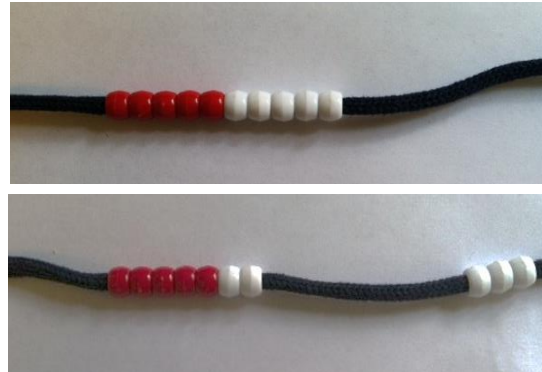
T: Push a set of 3 white beads away to the end of the pipe cleaner. (Be sure students push 3 beads as a set, rather than one at a time, to encourage decomposition rather than 1 to 1 counting.)

T: Tell me a number sentence to describe what we did.

S:  $10 - 3 = 7$ .

T: Use your beads to show me  $7 - 1$ . Write the number sentence on your board.

S: (Show 6 beads together and 1 separated bead. Write  $7 - 1 = 6$  on personal boards.)



Repeat the process for  $5 - 1$ .

T: We have 4 beads. This time, take 0 away.

S: (Look at their beads.)

T: How many beads do we have now?

S: 4 beads!

T: Hmm. Let's try that with a larger number. Push all your beads back to the middle so we can start with 10.

T/S: (Push beads back to middle, showing all 10 beads.)

T: We have 10 beads. Take away 0 beads. How many beads do we have now?

S: 10 beads!

T: Write the number sentence to show what we did.

S/T: (Write  $10 - 0 = 10$ .)

Repeat the process of taking 0 beads away and writing the new number sentence for the following suggested sequence:  $9 - 0$  and  $6 - 0$ .



**NOTES ON  
MULTIPLE MEANS  
OF ENGAGEMENT:**

Cultivate excitement for students who are ready to work with larger numbers by presenting numbers to 100. These students would also benefit from developing their own story, song, or poem for larger numbers.

### Problem Set (10 minutes)

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.

### Student Debrief (10 minutes)

**Lesson Objective:** Model 0 less and 1 less pictorially and as subtraction 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.

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


MP.8


- How can solving Problem 1 help you solve Problem 3?
- Explain to your partner any patterns you see in Problems 3–10.
- Talk to your partner about how visualizing your 5-groups can help you solve Problem 17(g).
- Explain how solving  $10 - 0$  can help you solve  $122 - 0$ . What happens every time you subtract 0?
- Explain how solving  $9 - 1$  can help you solve  $73 - 1$ . What happens every time you subtract 1? How does subtracting 1 relate to counting?
- How did the Application Problem connect to today's lesson?

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 33 Problem Set 1•1


Name Marica Date \_\_\_\_\_


Cross off, when needed, to subtract.


1.   $6 - 1 = 5$


2.   $6 - 0 = 6$


If you want, make a 5-groups drawing for each problem like the ones above. Show the subtraction.


3.   $7 - 1 = 6$


4.   $7 - 0 = 7$


5.   $10 - 1 = 9$

6.   $10 - 0 = 10$

7.   $8 - 1 = 7$

8.   $8 - 0 = 8$


9.   $9 - 1 = 8$


10.   $9 - 0 = 9$


COMMON CORE Lesson 33: Model 0 less and 1 less pictorially and as subtraction number sentences. Use dialogue to generate these focus cases. engage<sup>ny</sup> 1.1.7

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 33 Problem Set 1•1

Cross off, when needed, to subtract.

11.   $6 - 1 = 5$

12.   $8 - 1 = 7$

13.   $9 - 0 = 9$

Subtract.

14.  $7 - 1 = 6$

15.  $8 - 0 = 8$

16.  $9 - 1 = 8$

17. Fill in the missing number. Visualize your 5-groups to help you.

a.  $6 - 0 = 6$

b.  $6 - 1 = 5$

c.  $7 - 0 = 7$

d.  $7 - 1 = 6$

e.  $8 - 0 = 8$

f.  $8 - 1 = 7$

g.  $9 - 0 = 9$

h.  $9 - 1 = 8$

i.  $10 - 0 = 10$

j.  $10 - 1 = 9$

COMMON CORE Lesson 33: Model 0 less and 1 less pictorially and as subtraction number sentences. Use dialogue to generate these focus cases. engage<sup>ny</sup> 1.1.1

**Exit Ticket (3 minutes)**

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.

# A

Number Correct: \_\_\_\_\_

## Addition

1.	$3 + 1 =$	
2.	$4 + 1 =$	
3.	$5 + 1 =$	
4.	$9 + 1 =$	
5.	$6 + 1 =$	
6.	$8 + 1 =$	
7.	$2 + 1 =$	
8.	$7 + 1 =$	
9.	$1 + 7 =$	
10.	$1 + 9 =$	
11.	$1 + 6 =$	
12.	$2 + 2 =$	
13.	$3 + 2 =$	
14.	$4 + 2 =$	
15.	$8 + 2 =$	
16.	$5 + 2 =$	
17.	$6 + 2 =$	
18.	$7 + 2 =$	
19.	$2 + 7 =$	
20.	$2 + 8 =$	
21.	$2 + 5 =$	
22.	$2 + 6 =$	

23.	$1 + 2 =$	
24.	$3 + 6 =$	
25.	$1 + 8 =$	
26.	$2 + 3 =$	
27.	$1 + 4 =$	
28.	$2 + 4 =$	
29.	$1 + 3 =$	
30.	$1 + 5 =$	
31.	$3 + 3 =$	
32.	$4 + 3 =$	
33.	$5 + 3 =$	
34.	$6 + 3 =$	
35.	$7 + 3 =$	
36.	$3 + 7 =$	
37.	$3 + 4 =$	
38.	$3 + 5 =$	
39.	$4 + 4 =$	
40.	$5 + 4 =$	
41.	$6 + 4 =$	
42.	$4 + 6 =$	
43.	$4 + 5 =$	
44.	$5 + 5 =$	

**B**

Number Correct: \_\_\_\_\_

Improvement: \_\_\_\_\_

Addition

1.	$2 + 1 =$	
2.	$3 + 1 =$	
3.	$4 + 1 =$	
4.	$8 + 1 =$	
5.	$5 + 1 =$	
6.	$7 + 1 =$	
7.	$9 + 1 =$	
8.	$6 + 1 =$	
9.	$1 + 6 =$	
10.	$1 + 9 =$	
11.	$1 + 7 =$	
12.	$2 + 2 =$	
13.	$3 + 2 =$	
14.	$4 + 2 =$	
15.	$7 + 2 =$	
16.	$5 + 2 =$	
17.	$8 + 2 =$	
18.	$6 + 2 =$	
19.	$2 + 6 =$	
20.	$2 + 8 =$	
21.	$2 + 5 =$	
22.	$2 + 7 =$	

23.	$1 + 8 =$	
24.	$3 + 7 =$	
25.	$1 + 5 =$	
26.	$2 + 4 =$	
27.	$1 + 4 =$	
28.	$2 + 3 =$	
29.	$1 + 3 =$	
30.	$1 + 2 =$	
31.	$3 + 3 =$	
32.	$4 + 3 =$	
33.	$5 + 3 =$	
34.	$7 + 3 =$	
35.	$6 + 3 =$	
36.	$3 + 6 =$	
37.	$3 + 5 =$	
38.	$3 + 4 =$	
39.	$4 + 4 =$	
40.	$5 + 4 =$	
41.	$6 + 4 =$	
42.	$4 + 6 =$	
43.	$4 + 5 =$	
44.	$5 + 5 =$	

Name \_\_\_\_\_

Date \_\_\_\_\_

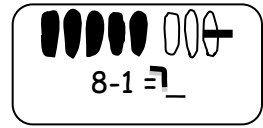
Cross off, when needed, to subtract.

1.  □

$6 - 1 = \underline{\quad}$

2.  □

$6 - 0 = \underline{\quad}$



If you want, make a 5-group drawing for each problem like the ones above. Show the subtraction.

3.

$7 - 1 = \underline{\quad}$

4.

$7 - 0 = \underline{\quad}$

5.

$10 - 1 = \underline{\quad}$

6.

$10 - 0 = \underline{\quad}$

7.

$8 - 1 = \underline{\quad}$

8.

$8 - 0 = \underline{\quad}$

9.

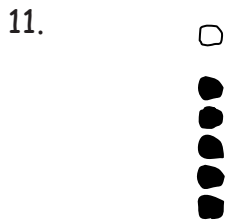
$9 - 1 = \underline{\quad}$

10.

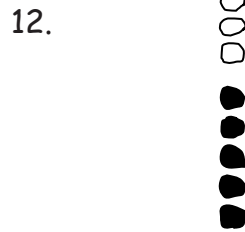
$9 - 0 = \underline{\quad}$



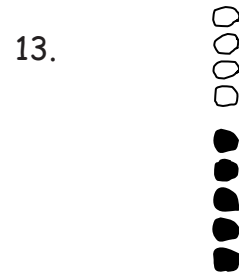
Cross off, when needed, to subtract.



$6 - 1 = \underline{\quad}$



$8 - 1 = \underline{\quad}$



$9 - 0 = \underline{\quad}$

Subtract.

14.  $7 - 1 = \underline{\quad}$

15.  $8 - 0 = \underline{\quad}$

16.  $9 - 1 = \underline{\quad}$

17. Fill in the missing number. Visualize your 5-groups to help you.

a.  $6 - 0 = \underline{\quad}$

b.  $6 - 1 = \underline{\quad}$

c.  $7 - \underline{\quad} = 7$

d.  $7 - 1 = \underline{\quad}$

e.  $8 - 0 = \underline{\quad}$

f.  $8 - \underline{\quad} = 7$

g.  $9 - \underline{\quad} = 9$

h.  $9 - 1 = \underline{\quad}$

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

j.  $10 - \underline{\quad} = 9$

Name \_\_\_\_\_ Date \_\_\_\_\_

Complete the number sentences. If you want, use 5-group drawings to show the subtraction.

1.

$$9 - 1 = \underline{\quad}$$

2.

$$8 = \underline{\quad} - 0$$

3.

$$8 = \underline{\quad} - 1$$

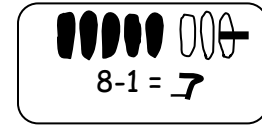
4.

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

Name \_\_\_\_\_

Date \_\_\_\_\_

Show the subtraction. If you want, use a 5-group drawing for each problem.



1.

$$9 - 1 = \underline{\quad}$$

2.

$$9 - 0 = \underline{\quad}$$

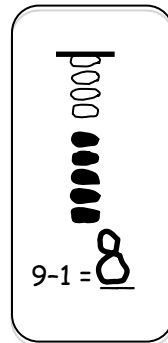
3.

$$6 - \underline{\quad} = 6$$

4.

$$6 = 7 - \underline{\quad}$$

Show the subtraction. If you want, use a 5-group drawing like the model for each problem.



5.

$$9 - \underline{\quad} = 9$$

6.

$$8 = 8 - \underline{\quad}$$

7.

$$10 - \underline{\quad} = 9$$

8.

$$7 - \underline{\quad} = 7$$

Write the subtraction number sentence to match the 5-group drawing.



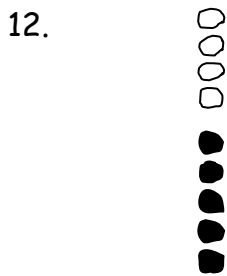
\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_



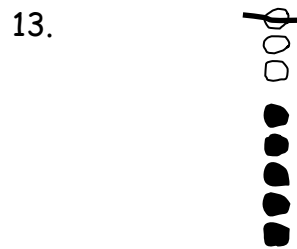
\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_



\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_



\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_



\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

14. Fill in the missing number. Visualize your 5-groups to help you.

a.  $7 - \underline{\quad} = 6$

b.  $0 = 7 - \underline{\quad}$

c.  $8 - \underline{\quad} = 7$

d.  $6 - \underline{\quad} = 5$

e.  $8 = 9 - \underline{\quad}$

f.  $9 = 10 - \underline{\quad}$

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

h.  $9 - \underline{\quad} = 8$