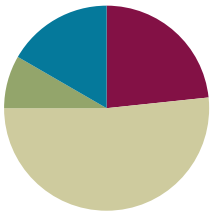
Lesson 9

Objective: Represent up to 120 objects with a written numeral.

Suggested Lesson Structure



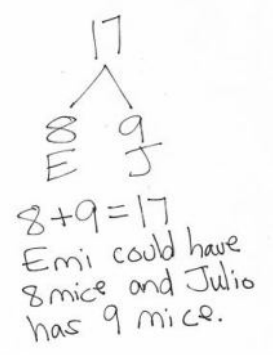
Application Problem	(5 minutes)
Fluency Practice	(14 minutes)
Concept Development	(31 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

Application Problem (5 minutes)

Emi and Julio together have 17 pet mice. How many mice might each child have?

Extension: Who has more, and how many more does that child have?

Note: Today's Application Problem practices decomposing a two-digit number and can have more than one correct answer. This work supports students' compositions and decompositions when they begin Topic C in Lesson 10. Students compose, decompose, and recompose various two-digit addends.



Fluency Practice (14 minutes)

- Sprint: +1, –1, +10, –10 **1.NBT.5** (10 minutes)
- Beep-Counting **1.NBT.1, 1.NBT.5** (4 minutes)

Sprint: +1, –1, +10, –10 (10 minutes)

Materials: (S) +1, –1, +10, –10 Sprint

Note: This Sprint reviews the grade-level standard of mentally adding or subtracting 10 and supports students' understanding of place value.

Beep-Counting (4 minutes)

Note: This activity reviews counting and reading numbers to 120.

Write number sequences on the board with missing numbers. Students read the sequence aloud, saying "beep" for the missing number. Then, students say the missing number on the teacher's signal.

Use the following suggested sequence, as time permits:

a. 10, 11, 12, ___
b. 110, 111, 112, ___
c. 20, 19, 18, ___
d. 120, 119, 118, ___
e. 17, 18, __, 20
f. 117, 118, ___, 120
g. 8, 9, ___, 11
h. 108, 109, ___, 111
i. 12, 11, ___, 9
j. 112, 111, ___, 109
k. ___, 7, 8, 9
l. ___, 107, 108, 109

Concept Development (31 minutes)

Materials: (T) 12 ten-sticks of linking cubes (ideally 6 red and 6 white ten-sticks), 10 additional loose linking cubes (S) Personal white board

Gather students with their personal white boards into a semicircle in the meeting area. The linking cubes should be placed close to the teacher but not in front of students.

T: Let's use our efficient counting skills to count different combinations of linking cubes. When I put out the linking cubes, your job is to count them as quickly as you can and write down the number of cubes I have. I put most of the cubes into sticks of ten, which should make it faster for you.

T: (Place 5 red ten-sticks and 5 white ten-sticks in the center for students to see. Scatter them far enough apart for students to count the 10 sticks. Wait as students count the sticks and record.)

T: How many linking cubes are here?

S: 100.

T: (Take all the sticks back. Place 10 ten-sticks down again, this time in a 5-group formation, with two rows of 5 sticks. Wait as students count and record. Check that students are recording 100 using the proper digits.)

T: How many linking cubes are here?

S: 100.

T: How did you know so quickly this time?

S: It's set up like 5 groups. → 5 tens and 5 tens is 10 tens. 10 tens is 100. → I saw 10 sets of sticks when I looked at them, so I knew 10 tens was 100.

T: (Lay out 12 ten-sticks using the 5-group formation with 2 more sticks on the side. As students count and record, watch for proper notation for 120.)

MP.4

T: How many tens do you see?

S: 12 tens.

T: How many cubes do you see?

S: 120 cubes.

T: How many ones would that be?

S: 120.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

For students who are struggling, work together to write the number in a place value chart, and then check the placement of the digits in the number.

Repeat the process with the following number of linking cubes.

- 99
- 101
- 109
- 110
- 111
- 113
- 119
- 115
- 104
- 107
- 110 made with 10 ten-sticks and 10 additional separated ones

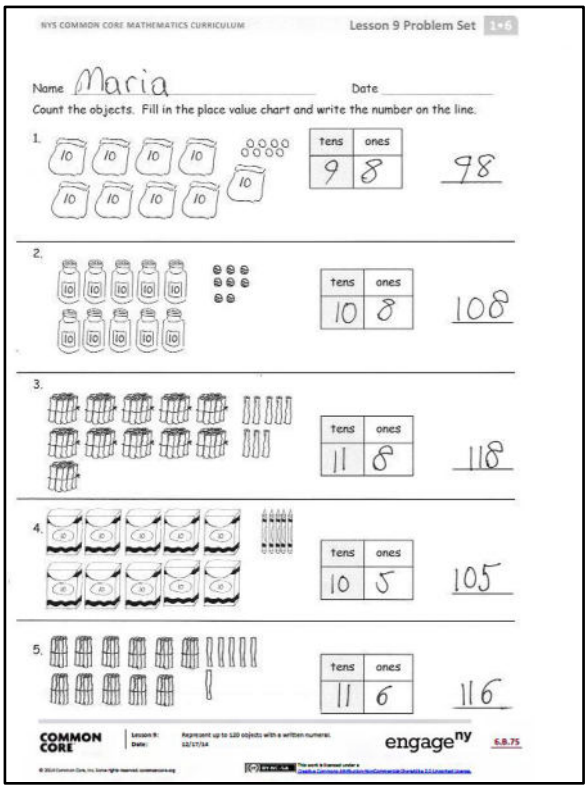
For more combinations, lay out objects for numbers between 98 and 120 using more than 10 ones, along with ten-sticks.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

As a challenge for some students, use other combinations of tens and ones, such as 9 tens 16 ones.

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 should solve these problems using the RDW approach used for Application Problems.


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 9 Problem Set 1•6

Name Maria Date

Count the objects. Fill in the place value chart and write the number on the line.

1. tens 9, ones 8 — 98
2. tens 10, ones 8 — 108
3. tens 11, ones 8 — 118
4. tens 10, ones 5 — 105
5. tens 11, ones 6 — 116

COMMON CORE engage^ny 6.B.75

Student Debrief (10 minutes)

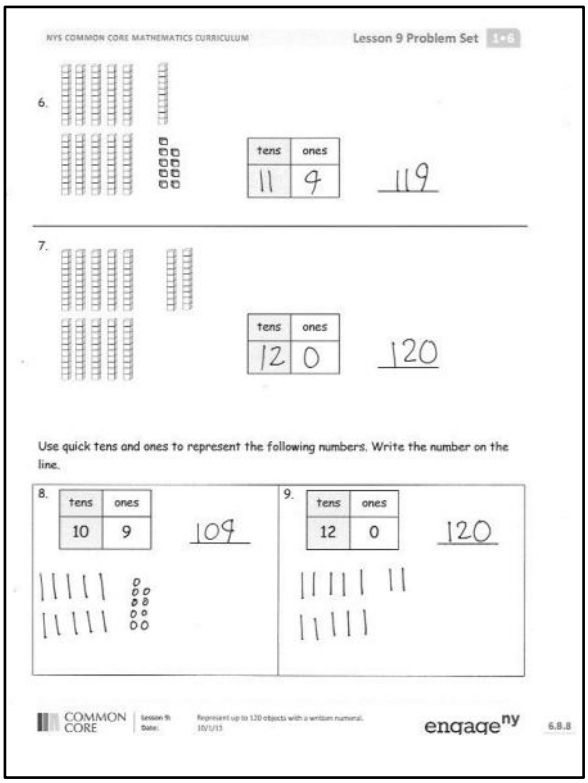
Lesson Objective: Represent up to 120 objects with a written numeral.

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.

- How many objects are in Problem 4? Problem 5? Which number is greater? Which picture takes up more space? What is another example of more objects taking up less space? Talk to your partner.
- Look at Problems 8 and 9. Which problem was quicker to draw and solve? Why?
- How is counting large numbers of objects like counting smaller numbers of objects? Explain your thinking. How is it different?
- Which beep-counting sequences are the quickest for you to answer? Why?
- Look at your Application Problem. What combinations did you use to show 17 pet mice? Are there other combinations that could be used?


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 9 Problem Set 1•6

6.

tens	ones
11	9

119

7.

tens	ones
12	0

120

Use quick tens and ones to represent the following numbers. Write the number on the line.

8.

tens	ones
10	9

109

9.

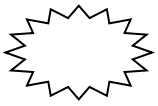
tens	ones
12	0

120

COMMON CORE Lesson 9: Date: Represent up to 120 objects with a written numeral. 10/1/13 engage^ny 6.B.8

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.

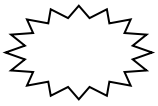
Number Correct: 

A

Name _____ Date _____

*Write the missing number. Pay attention to the addition or subtraction sign.

1.	5 + 1 = ☐		16.	29 + 10 = ☐	
2.	15 + 1 = ☐		17.	9 + 1 = ☐	
3.	25 + 1 = ☐		18.	19 + 1 = ☐	
4.	5 + 10 = ☐		19.	29 + 1 = ☐	
5.	15 + 10 = ☐		20.	39 + 1 = ☐	
6.	25 + 10 = ☐		21.	40 – 1 = ☐	
7.	8 – 1 = ☐		22.	30 – 1 = ☐	
8.	18 – 1 = ☐		23.	20 – 1 = ☐	
9.	28 – 1 = ☐		24.	20 + ☐ = 21	
10.	38 – 1 = ☐		25.	20 + ☐ = 30	
11.	38 – 10 = ☐		26.	27 + ☐ = 37	
12.	28 – 10 = ☐		27.	27 + ☐ = 28	
13.	18 – 10 = ☐		28.	☐ + 10 = 34	
14.	9 + 10 = ☐		29.	☐ – 10 = 14	
15.	19 + 10 = ☐		30.	☐ – 10 = 24	

Number Correct: 

B

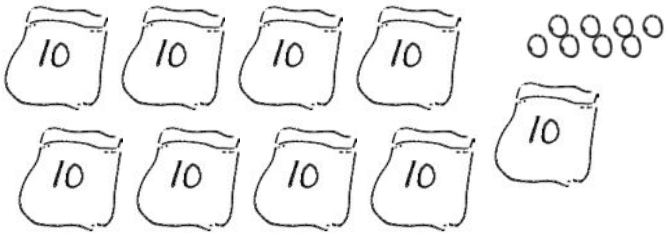
Name _____ Date _____

*Write the missing number. Pay attention to the addition or subtraction sign.

1.	4 + 1 = ☐		16.	28 + 10 = ☐	
2.	14 + 1 = ☐		17.	9 + 1 = ☐	
3.	24 + 1 = ☐		18.	19 + 1 = ☐	
4.	6 + 10 = ☐		19.	29 + 1 = ☐	
5.	16 + 10 = ☐		20.	39 + 1 = ☐	
6.	26 + 10 = ☐		21.	40 – 1 = ☐	
7.	7 – 1 = ☐		22.	30 – 1 = ☐	
8.	17 – 1 = ☐		23.	20 – 1 = ☐	
9.	27 – 1 = ☐		24.	10 + ☐ = 11	
10.	37 – 1 = ☐		25.	10 + ☐ = 20	
11.	37 – 10 = ☐		26.	22 + ☐ = 32	
12.	27 – 10 = ☐		27.	22 + ☐ = 23	
13.	17 – 10 = ☐		28.	☐ + 10 = 39	
14.	8 + 10 = ☐		29.	☐ – 10 = 19	
15.	18 + 10 = ☐		30.	☐ – 10 = 29	

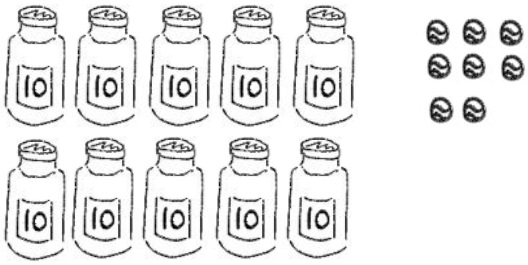
Name _____ Date _____

Count the objects. Fill in the place value chart, and write the number on the line.

1. 

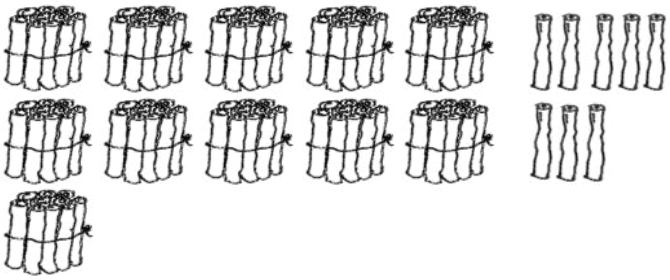
tens	ones

_____

2. 

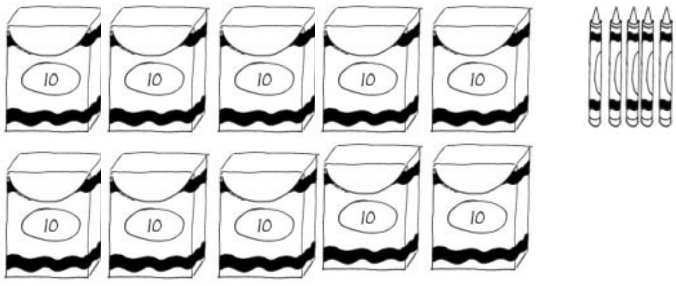
tens	ones

_____

3. 

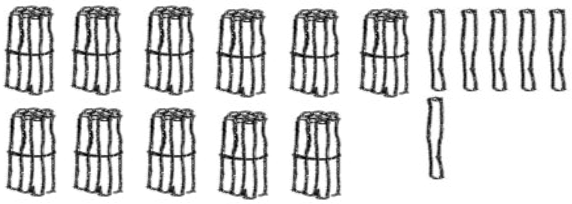
tens	ones

_____

4. 

tens	ones

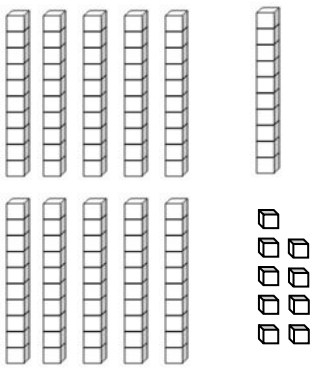
_____

5. 

tens	ones

_____

6.



tens	ones

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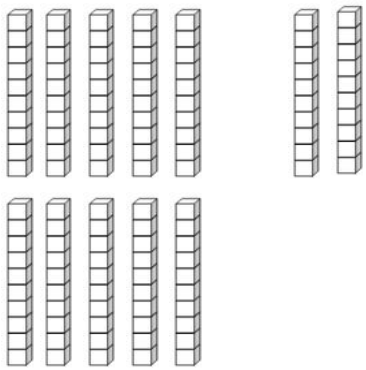
7.



tens	ones

_____

Use quick tens and ones to represent the following numbers. Write the number on the line.

8. _____

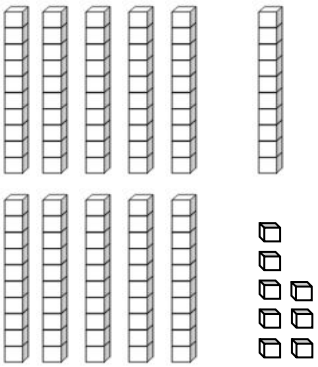
tens	ones
10	9

9. _____

tens	ones
12	0

Name _____ Date _____

1. Count the objects. Fill in the place value chart, and write the number on the line.



tens	ones

_____

2. Use quick tens and ones to represent the following numbers. Write the number on the line.

a.

tens	ones
11	0

_____

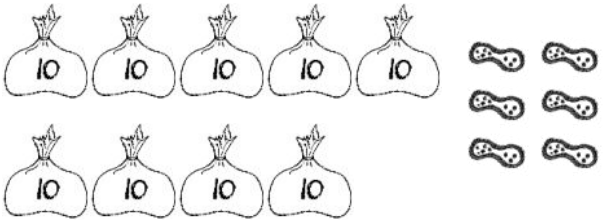
b.

tens	ones
10	1

_____

Name _____ Date _____

Count the objects. Fill in the place value chart, and write the number on the line.

1. 

tens	ones

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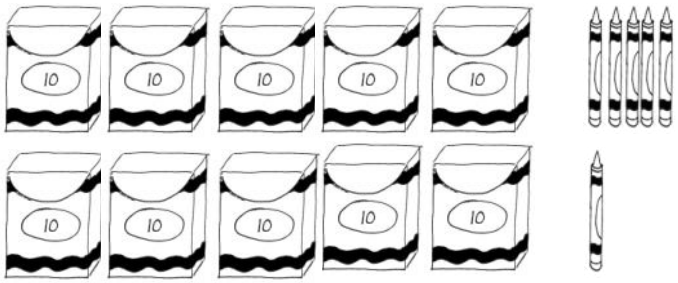
2. 

tens	ones

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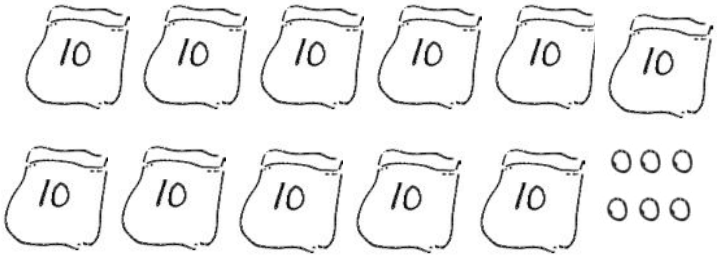
3. 

tens	ones

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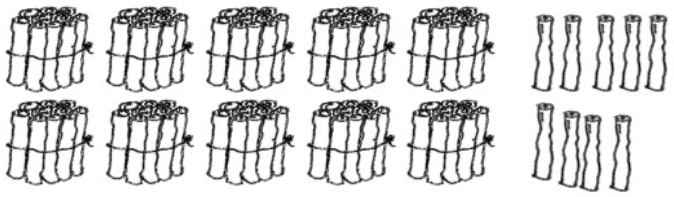
4. 

tens	ones

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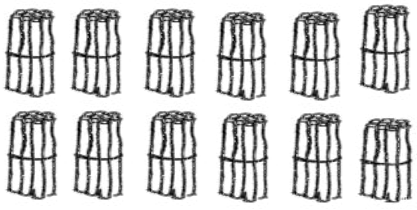
5. 

tens	ones

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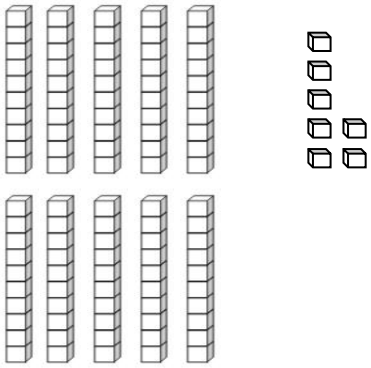
6. 

tens	ones

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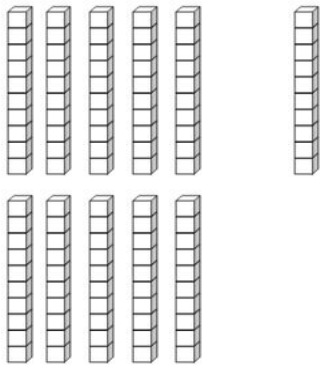
7. 

tens	ones

_____

Use quick tens and ones to represent the following numbers.
Write the number on the line.

8. _____

tens	ones
11	0

9. _____

tens	ones
10	5