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**GRADE K • MODULE 5**

## Numbers 10–20 and Counting to 100

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## Grade K • Module 5

# Numbers 10–20 and Counting to 100

## OVERVIEW

Students have worked intensively within 10 and have often counted to 30 using the Rekenrek during fluency practice. This sets the stage for Module 5, where students clarify the meaning of the 10 ones and some ones within a teen number and extend that understanding to count to 100. In Topic A, students start at the concrete level, counting 10 straws.

T: Count straws with me into piles of ten.

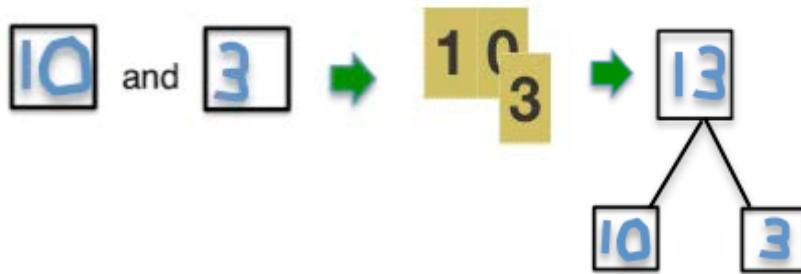
S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. 1, 2, 3, ... 8, 9, 10. 1, 2, 3, ... 8, 9, 10.

T: Let's count the piles!

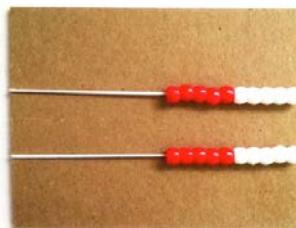
S: 1 pile, 2 piles, 3 piles, 4 piles.

Thus, kindergarten students learn to comfortably talk about 10 ones, setting the foundation for the critical Grade 1 step of understanding 1 ten. They next separate 10 objects from within concrete and pictorial counts up to 20, analyzing the total as 10 ones and no ones or 10 ones and some ones (**K.CC.1**, **K.NBT.1**). They see two distinct sets which are then counted the Say Ten way: ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight, ten nine, two ten. The students hear the separation of the 10 ones and some ones as they count, solidifying their understanding as they also return to regular counting, eleven, twelve, thirteen...etc. (**K.CC.5**)

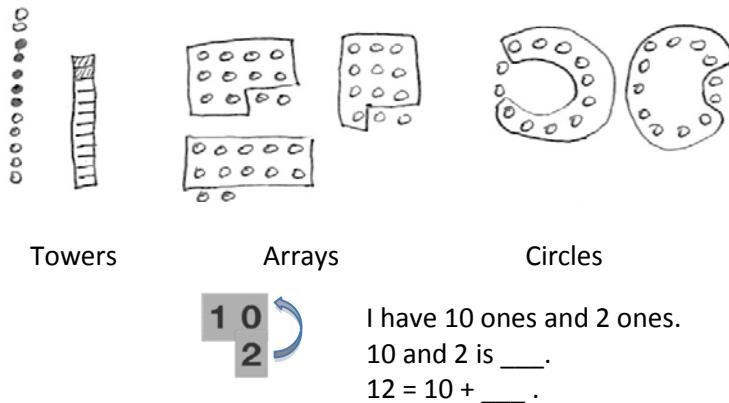
In Topic B, the two distinct sets of ones are composed, or brought together, through the use of the Hide Zero cards (pictured below) and number bonds. Students represent the whole number numerically while continuing to separate the count of 10 ones from the count of the remaining ones with drawings and materials (**K.NBT.1**). Emerging from Topic B, students should be able to model and write a teen number without forgetting that the '1' in 13 represents 10 ones (**K.CC.3**).



Topic C opens with the students making a simple Rekenrek to 20 (pictured below) and modeling numbers thereon. The tens can be seen both as two lines with a color change at the five or two parallel uni-color fives.



In Topic C, the focus is now on the decomposition of the total teen quantity so that one part is ten ones. This is what makes Topic C a step forward from Topics A and B. Previously, the ten and ones were always separated when modeled pictorially or with materials. Now, the entire teen number is a whole quantity represented both concretely and pictorially in different configurations: towers or linear configurations, arrays (including the 10-frame or 5-groups,) and circles. The students decompose the total into 10 ones and some ones. Through their experiences with the different configurations, students have practice both separating 10 ones within teen numbers and counting/conservation as they count quantities arranged in different ways and, as always, use math talk to share about their observations (**K.CC.5**). They also come to know each successive teen number as one larger than the previous number (**K.CC.4a**).



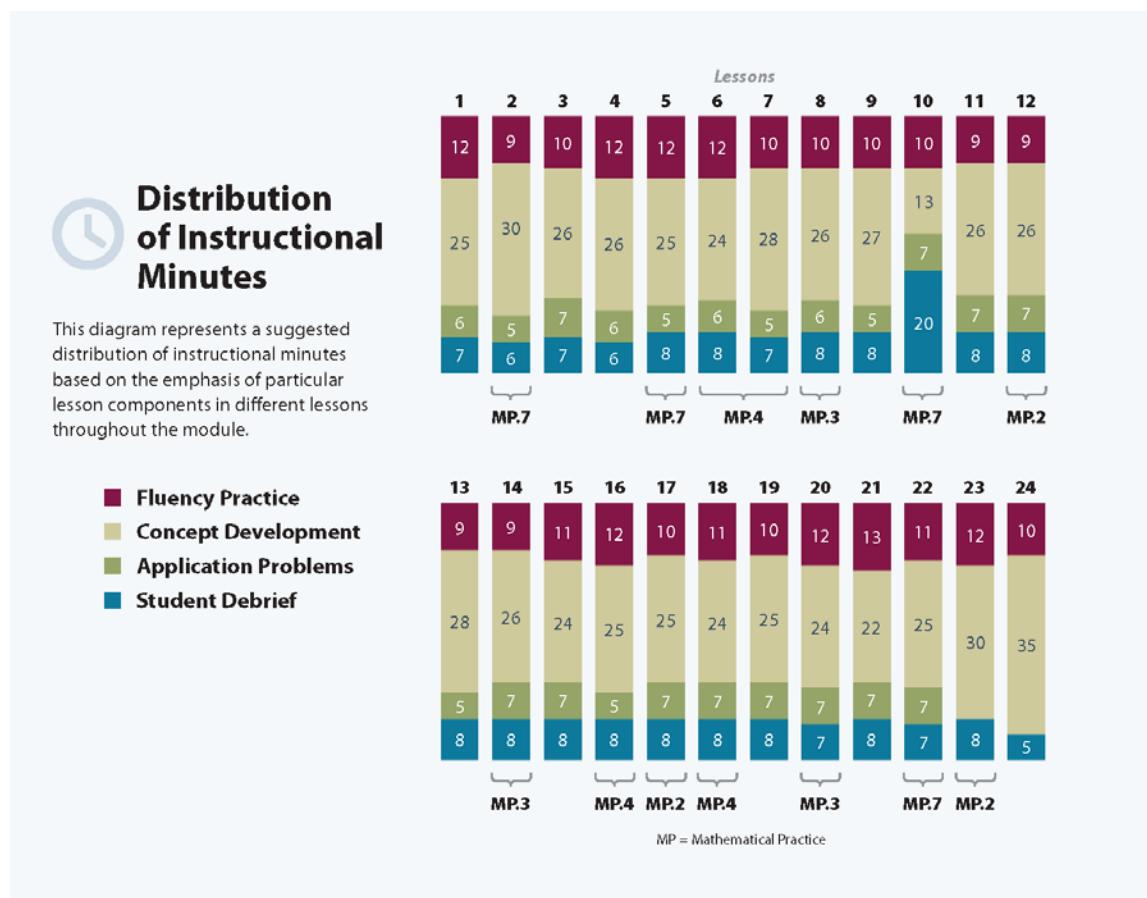
In Topic D, students extend their understanding of counting teen numbers to numbers 21 to 100. They first count by tens both the Say Ten way, 1 ten, 2 tens, 3 tens, 4 tens, etc. and the regular way, twenty, thirty, forty, etc. They then count by ones to 100, first within a decade and finally across the decade (**K.CC.1**, **K.CC.2**). Topic D involves the Grade 1 standard **1.NBT.1** as students also write their numbers from 21–100. We include the writing of larger numbers because of the range of activities they make possible. The writing of these numbers is not assessed or emphasized, however. Topic D closes with an optional exploration of numbers on the Rekenrek, bringing together counting with decomposition and finding embedded numbers within larger numbers. This lesson is optional because it does not directly address a particular Kindergarten standard.

In Topic E, students apply their skill with the decomposition and composition of teen numbers. In Lesson 20, they represent both compositions and decompositions as addition statements (**K.NBT.1**). In Lesson 21, they

model teen quantities with materials in a number bond and hide one part. The hidden part is represented as an addition sentence with a hidden part, e.g.  $10 + \underline{\hspace{1cm}} = 13$  or  $13 = \underline{\hspace{1cm}} + 3$ . The missing addend aligns Lesson 21 to the Grade 1 standard **1.OA.8**. In Lesson 22, students apply their skill with decomposition into 10 ones and some ones to compare the some ones of two numbers and thus to compare the teen numbers. They “stand” on the structure of the 10 ones and use what they know of numbers 1–9 (**MP.7**). Comparison of numbers 1–9 is a Kindergarten standard (**K.CC.6**, **K.CC.7**).

In Lesson 23, students reason about situations to determine whether they are decomposing a teen number (as 10 ones and some ones) or composing 10 ones and some ones to find a teen number. They analyze their number sentences that represent each situation to determine if they started with the total or the parts, and if they composed or decomposed, e.g.,  $13 = 10 + 3$  or  $10 + 3 = 13$  (**K.NBT.1**). Throughout the lesson, students draw the number of objects presented in the situation (**K.CC.5**).

The module closes with a culminating task wherein students integrate all the methods they have used up until now to show decomposition. For example, they are instructed, “Open your mystery bag. Show the number of objects in your bag in different ways using the materials you choose.” (**MP.5**) This experience also serves as a part of the End-of-Module Assessment, allowing the student to demonstrate skill and understanding using all he has learned throughout the module.



## Focus Grade Level Standards

### Know number names and the count sequence.

- K.CC.1** Count to 100 by ones and by tens.
- K.CC.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
- K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).

### Count to tell the number of objects.<sup>1</sup>

- K.CC.4** Understand the relationship between numbers and quantities; connect counting to cardinality.
- Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  - Understand that each successive number name refers to a quantity that is one larger.
- K.CC.5** Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

### Work with numbers 11–19 to gain foundations for place value.

- K.NBT.1** Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g.,  $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

## Focus Standards for Mathematical Practice

- MP.2** Reason abstractly and quantitatively. Students represent teen numerals with concrete objects separated as 10 ones and some ones.
- MP.3** Construct viable arguments and critique the reasoning of others. Students explain their thinking about teen numbers as 10 ones and some ones and how to represent those numbers as addition sentences.
- MP.4** Model with mathematics. Students model teen quantities with number bonds, place value cards and teen numbers.
- MP.7** Look for and make use of structure. Students use the structure of 10 ones to reason about teen numbers. They compare teen numbers using the structure of the 10 ones to compare the some ones.

<sup>1</sup> K.CC.4a and K.CC.4d are addressed in Module 1; K.CC.4d is addressed again in Module 6.

## Overview of Module Topics and Lesson Objectives

| Standards  | Topics and Objectives |   | Days |
|--|-----------------------|---|------|
| K.CC.1<br>K.NBT.1<br>K.CC.2<br>K.CC.4a<br>K.CC.4b<br>K.CC.4c<br>K.CC.5           | A                     | <b>Count 10 Ones and Some Ones</b><br>Lesson 1: Count straws into piles of ten; count the piles as 10 ones.<br>Lesson 2: Count 10 objects within counts of 10 to 20 objects, and describe as 10 ones and ___ ones.<br>Lesson 3: Count and circle 10 objects within images of 10 to 20 objects, and describe as 10 ones and ___ ones.<br>Lesson 4: Count straws the Say Ten way to 19; make a pile for each ten.<br>Lesson 5: Count straws the Say Ten way to 20; make a pile for each ten.  | 5    |
| K.CC.3<br>K.NBT.1<br>K.CC.1<br>K.CC.2<br>K.CC.4a<br>K.CC.4b<br>K.CC.4c<br>K.CC.5 | B                     | <b>Compose Numbers 11–20 from 10 Ones and Some Ones; Represent and Write Teen Numbers</b><br>Lesson 6: Model with objects and represent numbers 10 to 20 with place value or Hide Zero cards.<br>Lesson 7: Model and write numbers 10 to 20 as number bonds.<br>Lesson 8: Model teen numbers with materials from abstract to concrete.<br>Lesson 9: Draw teen numbers from abstract to pictorial.   | 4    |
| K.CC.4b<br>K.CC.4c<br>K.CC.5<br>K.NBT.1<br>K.CC.3<br>K.CC.4a                     | C                     | <b>Decompose Numbers 11–20, and Count to Answer “How Many?” Questions in Varied Configurations</b><br>Lesson 10: Build a Rekenrek to 20.<br>Lesson 11: Show, count, and write numbers 11 to 20 in tower configurations increasing by 1—a pattern of <i>1 larger</i> .<br>Lesson 12: Represent numbers 20 to 11 in tower configurations decreasing by 1—a pattern of <i>1 smaller</i> .<br>Lesson 13: Show, count, and write to answer <i>how many</i> questions in linear and array configurations<br>Lesson 14: Show, count, and write to answer <i>how many</i> questions with up to 20 objects in circular configurations. | 5    |
|  |                       | Mid-Module Assessment: Topics A–C (interview style assessment)  | 3    |
| K.CC.1<br>K.CC.2   | D                     | <b>Extend the Say Ten and Regular Count Sequence to 100</b><br>Lesson 15: Count up and down by tens to 100 with Say Ten and regular   | 5    |



| Standards  | Topics and Objectives |   | Days      |
|--|-----------------------|---|-----------|
| K.CC.3<br>K.CC.4c<br>K.CC.5<br>K.NBT.1<br>1.NBT.1 <sup>2</sup>   |                       | <p>Lesson 16: Count within tens by ones.</p> <p>Lesson 17: Count across tens when counting by ones through 40.</p> <p>Lesson 18: Count across tens by ones to 100 with and without objects.</p> <p>Lesson 19: Explore numbers on the Rekenrek. (Optional.)</p>  |           |
| K.CC.5<br><b>K.NBT.1</b><br>K.CC.1<br>K.CC.2<br>K.CC.3<br>K.CC.4c<br>K.CC.6<br>1.OA.8 <sup>3</sup><br>1.NBT.3 <sup>4</sup> | E                     | <p><b>Represent and Apply Compositions and Decompositions of Teen Numbers</b></p> <p>Lesson 20: Represent teen number compositions and decompositions as addition sentences.</p> <p>Lesson 21: Represent teen number decompositions as 10 ones and some ones and find a hidden part.</p> <p>Lesson 22: Decompose teen numbers as 10 ones and some ones; compare <i>some ones</i> to compare the teen numbers.</p> <p>Lesson 23: Reason about and represent situations, decomposing teen numbers into 10 ones and some ones and composing 10 ones and some ones into a teen number.</p> <p>Lesson 24: Culminating Task—Represent teen number decompositions in various ways.</p> | 5         |
|  |                       | End-of-Module Assessment: Topics D–E (Interview style assessment)   | 3         |
| <b>Total Number of Instructional Days</b>  |                       |   | <b>30</b> |

<sup>2</sup> Students write numbers 21–100, aligned to Grade 1 standard 1.NBT.1.

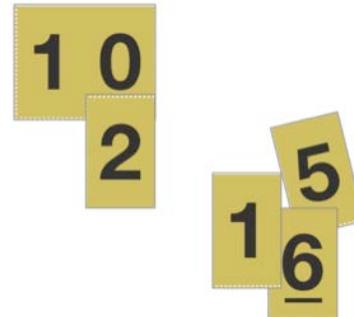
<sup>3</sup> While using concrete materials, a hidden part is related to  $10 + \underline{\hspace{1cm}}$ . Missing addends are aligned to 1.OA.8.

<sup>4</sup> Kindergarten standards K.CC.6 and K.CC.7 compare numbers to 10. Grade 1's standard 1.NBT.3 compares numbers greater than 10.

## Terminology

### New or Recently Introduced Terms

- Say Ten counting by tens to 100 (e.g., 1 ten, 2 tens, 3 tens, 4 tens, 5 tens, 6 tens, 7 tens, 8 tens, 9 tens, 10 tens)
- Regular counting by ones from 11 – 20 (e.g., eleven, twelve, thirteen,...etc.)
- Regular counting by tens to 100 (e.g., ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred)
- Hide Zero cards (in later grades called Place Value cards, pictured to the right)
- 10 ones and some ones
- Teen numbers
- 10 and \_\_
- 10 plus



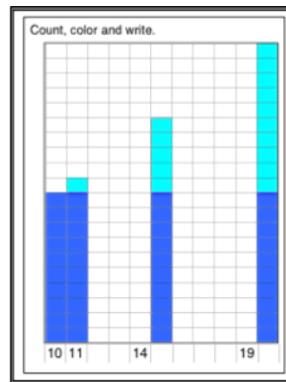
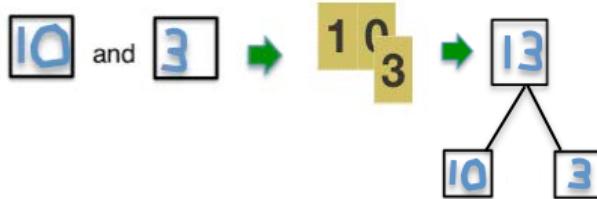
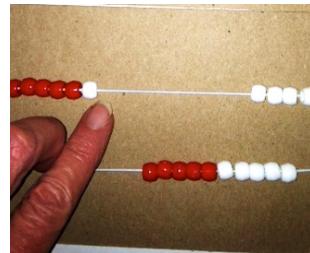
### Familiar Terms and Symbols<sup>5</sup>

- Count 10 ones
- Circle 10 ones
- Circular count
- Number tower
- Number bond
- Part, whole, total
- Dot path, empty path, number path
- Scatter count
- 5-group
- 10-frame
- Linear count
- Say Ten counting (e.g. , 11–20 is spoken as “ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight, ten nine, two ten”)

<sup>5</sup> These are terms and symbols students have used or seen previously.

## Suggested Tools and Representations

- 50 sticks or straws for each group of 2 students
- Student made Rekenrek (pictured to the right):  
10 red and 10 white pony beads, 1 cardboard strip, 2 elastics
- 1 egg carton per pair of students with 2 slots cut off to make a carton with 10 slots
- Hide Zero cards (in later grades called Place Value cards)
- Objects to put in the egg carton such as mandarin oranges, plastic eggs or beans
- Single and double ten-frames
- A variety of worksheets for lessons and Sprints
- Linking cubes: ideally 10 of two different colors per student
- Number bond template



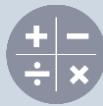
## Scaffolds<sup>6</sup>

The scaffolds integrated into *A Story of Units* give alternatives for how students access information as well as express and demonstrate their learning. Strategically placed margin notes are provided within each lesson elaborating on the use of specific scaffolds at applicable times. They address many needs presented by English language learners, students with disabilities, students performing above grade level, and students performing below grade level. Many of the suggestions are organized by Universal Design for Learning (UDL) principles and are applicable to more than one population. To read more about the approach to differentiated instruction in *A Story of Units*, please refer to “How to Implement *A Story of Units*.”

<sup>6</sup> Students with disabilities may require Braille, large print, audio, or special digital files. Please visit the website, [www.p12.nysed.gov/specialed/aim](http://www.p12.nysed.gov/specialed/aim), for specific information on how to obtain student materials that satisfy the National Instructional Materials Accessibility Standard (NIMAS) format.

## Assessment Summary

| Assessment Type               | Administered                      | Format                 | Standards Addressed                               |
|-------------------------------|-----------------------------------|------------------------|---|
| Mid-Module Assessment Task    | After Topic C                     | Interview with Rubric  | K.CC.1<br>K.CC.3<br>K.CC.4bc<br>K.CC.5<br>K.NBT.1 |
| End-of-Module Assessment Task | After Topic E                     | Interview with Rubric  | K.CC.1<br>K.CC.2<br>K.CC.5<br>K.NBT.1             |
| Culminating Task              | Last Instructional Day, Lesson 24 | Cooperative Group Task | K.NBT.1   |



## Topic A

## Count 10 Ones and Some Ones

**K.CC.1, K.NBT.1, K.CC.2, K.CC.4a, K.CC.4b, K.CC.4c, K.CC.5**

|                               |         |   |
|-------------------------------|---------|---|
| <b>Focus Standard:</b>        | K.CC.1  | Count to 100 by ones and by tens.   |
|                               | K.NBT.1 | Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. |
| <b>Instructional Days:</b>    | 5       |   |
| <b>Coherence -Links from:</b> | GPK–M5  | Write Numerals to 5, Addition and Subtraction Stories, Count to 20  |
| <b>-Links to:</b>             | G1–M2   | Place Value, Comparison, Addition and Subtraction of Numbers to 20  |

In Topic A, students count two separate parts within teen numbers, 10 ones and some ones. They start by counting piles of 10 straws to understand 10 ones. In the Lesson 2, students separate 10 ones and some ones from within teen quantities using an egg carton cut off to have 10 compartments. Continuing with decomposing, in Lesson 3, students circle 10 ones within teen quantities at the pictorial level. In Lessons 4 and 5, students count their 10 ones and some ones to 20 the Say Ten way (e.g., ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight, ten nine, 2 ten).<sup>1</sup>

<sup>1</sup> In the NBT Progression on page 5, this is referred to as the East Asian way of counting.

**A Teaching Sequence Towards Mastery of Counting 10 Ones and Some Ones**

**Objective 1:** Count straws into piles of ten; count the piles as 10 ones.  
(Lesson 1)

**Objective 2:** Count 10 objects within counts of 10 to 20 objects, and describe as 10 ones and \_\_\_ ones.  
(Lesson 2)

**Objective 3:** Count and circle 10 objects within images of 10 to 20 objects, and describe as 10 ones and  
\_\_\_ ones.  
(Lesson 3)

**Objective 4:** Count straws the Say Ten way to 19; make a pile for each ten.  
(Lesson 4)

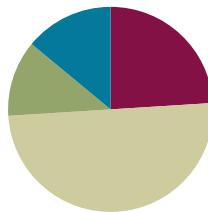
**Objective 5:** Count straws the Say Ten way to 20; make a pile for each ten.  
(Lesson 5)

## Lesson 1

**Objective:** Count straws into piles of ten; count the piles as 10 ones.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (12 minutes)        |
| Application Problem | (6 minutes)         |
| Concept Development | (25 minutes)        |
| Student Debrief     | (7 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (12 minutes)

- Finger Counting from Left to Right **K.CC.2, K.CC.4** (2 minutes)
- 5-Frame Flashes **K.CC.1, K.CC.4** (4 minutes)
- Ten-Frame Flashes **K.CC.2** (6 minutes)

### Finger Counting from Left to Right (2 minutes)

Count by ones within 10 on the fingers from left to right, from pinky on the left hand as 1 to pinky on the right hand as 10.

Hover the fingers as if playing the piano. Drop the finger as it is counted and leave it down. Start and end at different numbers, e.g., count from 5 to 7. (The five fingers of the left hand have played. The students says, “6, 7” while playing the thumb and pointer finger of the right hand.)

### 5-Frame Flashes (4 minutes)

Materials: (T) Large 5-frame cards (S) 5-frame cards

- T: (Show 4 dots.) How many dots do you see?  
 S: 4.  
 T: How many more to make 5?  
 S: 1.  
 T: Say the number sentence.  
 S: 4 and 1 makes 5.



#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

To help English language learning students develop oral language skills, alternate between choral response and written response. Provide personal boards for students to write the answer during frame flashes.

Continue with the following possible sequence: 3, 2, 1, 4, 2, 3, 5, 0, 5. Have students play with a partner. Give pairs sets of 5-frame cards.

## Ten-Frame Flashes (6 minutes)

Materials: (T) Ten-frame cards (S) Ten-frame cards

T: (Show 9 dots.) How many dots do you see?

S: 9.

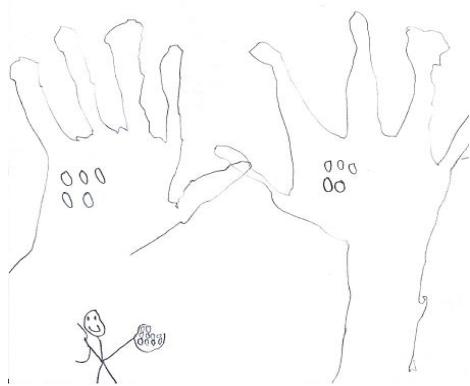
T: How many more does nine need to be 10?

S: 1.

Repeat for possible sequence: 8, 5, 7, 6, 1, 4, 3, 5, 2, 9. Have students play with a partner. Give pairs of sets of cards.

## Application Problem (6 minutes)

Marta loves to share her peanuts at recess. She counted 10 peanuts into the hands of her friend Joey. Draw a picture of the peanuts in Joey's hand.



### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

For students who are above grade level, provide extensions to the application problem such as:

- If Marta had 15 peanuts to start with, how many does she have left?
- How many more peanuts does Marta need to have 10 in her hand?
- Draw a picture to show Marta's peanuts.

## Concept Development (25 minutes)

Materials: (S) 1 egg carton cut to have 10 compartments for each pair of students, 10 bags with different items in each (suggestions to the right), 40 straws

T: Count to find out how many slots there are in your egg carton. Wait for the signal to tell me. (Pause, when all are ready, give the signal.)

S: 10!

T: Each team will explore 10 bags. Find out which bags have 10 things in them.

### Bag Contents:

- 8 clothes pins
- 8 pasta shells
- 8 beads
- 9 3"x 5" cards
- 9 pennies
- 9 pencils
- 10 erasers
- 10 linker cubes
- 10 walnuts in the shell
- 10 play dollars

Have the students in pairs investigate each bag by placing the materials into the egg carton to see if there are enough to count 10 ones. After counting the items in their bag, students will pass it to the next pair on a signal.

- T: (Once the students have investigated all 10 bags.) Discuss with the partner next to you, which bags had 10 things?
- S: The erasers, the linker cubes, the walnuts, and the cards!
- T: How many times did we count 10 things?
- S: 4 times!
- T: Let's count these straws into 4 piles of 10 to match the erasers, linker cubes, walnuts, and cards.
- T: Count with me to match the number of erasers.
- S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.
- T: 1 pile! Let's count another pile to match the number of linker cubes.
- S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.
- T: How many piles of 10 do we have now?
- S: 2 piles!
- T: Let's count another pile to match the number of walnuts.

Continue with the walnuts and 3"x 5" cards.

- T: Let's count how many piles of 10 we made.
- S: 1 pile, 2 piles, 3 piles, 4 piles.
- T: How many straws are in each pile?
- S: 10 straws.
- T: Let's count the bags of 10, too.
- S: 1 bag, 2 bags, 3 bags, 4 bags.
- T: How many things are in each bag?
- S: 10 things.
- T: Talk to your partner about what is the same and different about the bags of things and the piles of straws.
- T: (Allow time.) How many times did we count 10 ones when we were counting the straws?
- S: 4.
- T: How many times did we count 10 things when we were counting the things in the bags?
- S: 4.
- T: How many of the bags didn't have 10 things?
- S: 6 bags!

**Problem Set (5 minutes)**

Students should do their personal best to complete the Problem Set within the allotted 5 minutes.

Have the students circle the pictures that show 10 things.

Note: Students have been counting linear, array, circular and scatter configurations through 10 since the first module (**K.CC.5**). They have further developed skill in circling pictorial sets in Module 4 when learning to add and subtract.

**Student Debrief (7 minutes)**

**Lesson Objective:** Count straws into piles of ten; count the piles as 10 ones.

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.

Have the students bring their Problem Set to the carpet and discuss with a partner which things they circled and why. Suggested sentence frames:

"I circled \_\_\_\_\_ because I counted 10 of them."  
 "I didn't circle \_\_\_\_\_ because I counted \_\_\_\_ of them."

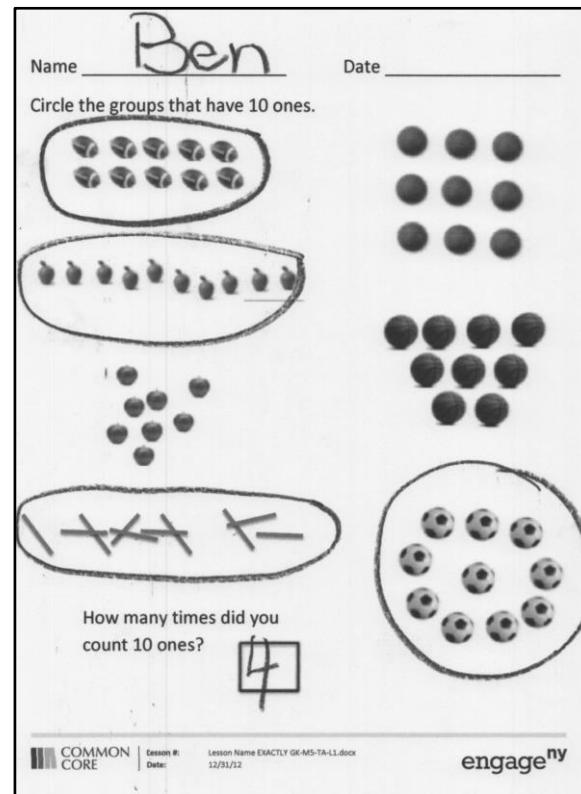
Have them count the number of sets of 10 ones they counted.

Help students to remember that there were also 4 piles of 10 straws and 4 bags with 10 things in them. Have them discuss how the Problem Set is the same as and different from their work with the bags and straws. Would you ever put apples or soccer balls in bags of 10?

To review and apply **K.CC.4**, discuss how many objects the other groups are missing to make 10. Have students draw in the missing objects and circle all the sets of 10 ones. "Now how many times did we count 10 ones?"

**Exit Ticket (3 minutes)**

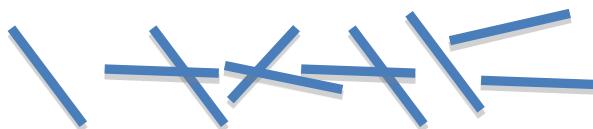
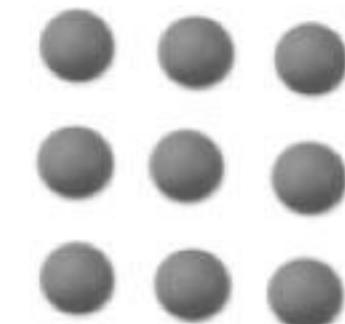
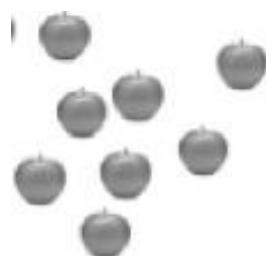
After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.



Name \_\_\_\_\_

Date \_\_\_\_\_

Circle the groups that have 10 ones.



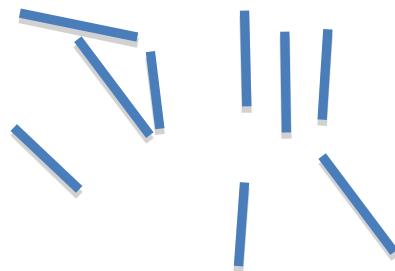
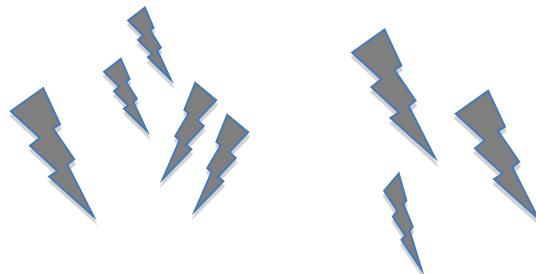
How many times did you count  
10 ones?



Name \_\_\_\_\_

Date \_\_\_\_\_

Circle the groups that have 10 things.

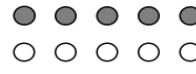
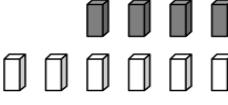
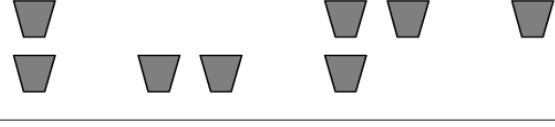
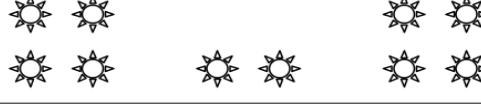
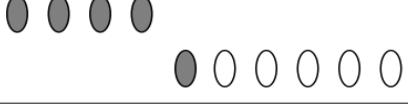
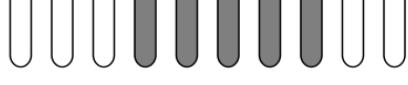


How many times did you count  
10 things?

Name \_\_\_\_\_

Date \_\_\_\_\_

Circle 10.

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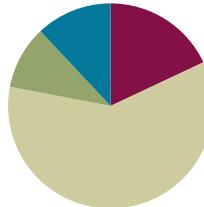
Count the number of times you circled 10 ones. Tell a friend or adult how many times you circled 10 ones.

## Lesson 2

**Objective:** Count 10 objects within counts of 10 to 20 objects, and describe as 10 ones and \_\_\_ ones.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (9 minutes)         |
| Application Problem | (5 minutes)         |
| Concept Development | (30 minutes)        |
| Student Debrief     | (6 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (9 minutes)

- How Many is One More **K.CC.2** (3 minutes)
- Show One More on Fingers **K.CC.2** (3 minutes)
- Count Piles of Ten **K.CC.2, K.CC.4** (3 minutes)

### How Many is One More (3 minutes)

Materials: (T/S) Ten-frame cards (large teacher set and smaller sets per pair of students)

T: (Show 3.) How many dots?

S: 3.

T: What's one more than 3?

S: 4 is one more than 3.

Continue with the following possible sequence: 1, 4, 2, 4, 5, 6, 7, 9, 5, 8, 7. Eliminate asking them to identify the base number as quickly as possible. Students then continue this activity with each other in pairs.

### Show One More on Fingers (3 minutes)

Materials: (T) Rekenrek

T: (Show 5 beads.) Count the number of beads.

S: 1, 2, 3, 4, 5.

T: Count one more on your fingers left to right.

### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Deepen above grade level student understanding by asking students to explain strategies for identifying “one more.” Then have them apply their strategies through practice with a partner.

Ask students:

- Could you use the same strategy for solving “two more” and “three more”?

S: (Students hover hands as if playing the piano. They drop a finger or “play a note” starting with the left pinky.) 1, 2, 3, 4, 5, 6.

Continue with the following possible sequence: 6, 4, 7, 9, 8, 7, 6.

### Count Piles of Ten (3 minutes)

Materials: (S) About 40 straws for each pair of students

Have students see how many piles of 10 straws they can count.

### Application Problem (5 minutes)

Lisa counted some sticks into one pile of 10. She counted 5 other sticks into another pile. Draw a picture to show Lisa’s piles of sticks.

Note to the teacher: For now, just focus on the pile of 10 sticks and the pile of 5 rather than composing the teen number.

(Bonus: Have early finishers draw Lisa’s piles on another day when she made one pile of 10 sticks and one pile of 8 sticks!)

### Concept Development (30 minutes)

Materials: (S) 1 egg carton cut to have 10 compartments for each pair of students, 10 bags with different items in each (suggestions to the right)

T: Count to find out how many slots there are in your egg carton. Wait for the signal to tell me.

S: (Pause. When all are ready, give the signal.) 10!

T: Each team will count the objects in ten bags. To count the objects in your bag, start by placing the objects in the egg carton, then put any extra objects next to the carton.

T: Tell your partner, “I have 10 ones and \_\_\_\_ ones.”

T: We’ll do one together first. (Demonstrate.)

Have pairs of students count out the given teen number, decomposing it as 10 ones and some more ones. After counting the objects, have pairs trade bags and count the new objects.

T: (Once the students have counted all 10 bags.) Let’s see what you discovered! Count the clothes pins with me.

S: (As you show each one using the egg carton.) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.

#### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Access prior knowledge. Remind students of what a ten looks like by providing them with empty ten-frames. Students might then draw sets of ten sticks in the ten-frames.



#### Bag Contents:

- 18 clothes pins
- 20 pasta shells
- 13 beads
- 16 pennies
- 11 pencils
- 10 erasers
- 14 linker cubes
- 12 walnuts in the shell
- 10 play dollars
- 15 counting chips

- T: How many clothes pins are there?  
 S: 18!  
 T: "10 ones and \_\_\_ ones?" Let's complete this sentence.  
 S: 18 is 10 ones and 8 ones.  
 T: Yes!

Have students in pairs count then decompose the other quantities in the other bags using their egg cartons, allowing them to recognize and internalize the structure of teen numbers as 10 ones and some more ones. Continue to encourage statements following the pattern "12 is 10 ones and 2 ones."

### Problem Set (8 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes.

Note: Students use the method of checking off one object each time they count. This is an easier strategy than

circling 10 items which will be part of the next lesson.

### Student Debrief (6 minutes)

**Lesson Objective:** Count 10 objects within counts of 10 to 20 objects, and describe as 10 ones and \_\_\_ ones.

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

Have the students bring their Problem Set to the carpet and work with a partner to check their count of 10 ones and some more ones. Have them say the teen number as 10 ones and some more ones.

- S: There are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 ducks.  
 S: 13 is 10 ones and 3 ones.

Ask students to look at the picture of the ducks. 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.

- Is it easy to see ten ones in this picture? Why?
- How is this picture the same and different from counting using the egg carton?

MP.7



Lesson 2:

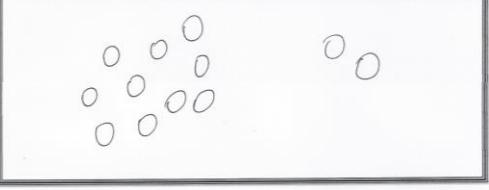
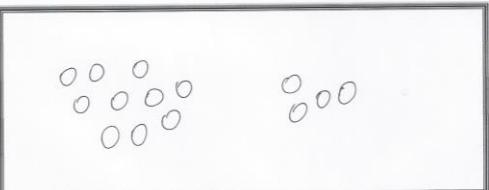
Date:

Count 10 objects within counts of 10 to 20 objects, and describe as 10 ones and \_\_\_ ones.

11/14/13

5.A.12

|   |  |
|---|--|
| Name <u>Ben</u> Date _____  |  |
| <br>I have 10 ones and 2 ones.<br>Touch and count 10 things. Put a check over each one as you count 10 things. |  |
| <br>I have 10 ones and <u>3</u> ones.   | <br>I have 10 ones and <u>2</u> ones.       |
| <br>I have <u>10</u> ones and <u>6</u> ones.  | <br>I have <u>10</u> ones and <u>1</u> one. |

|  |  |
|--|--|
| Draw your picture to match the words.  |  |
| I have 10 ones and 2 ones:<br> |  |
| I have 10 ones and 4 ones:<br> |  |

- MP.7**
- Which was easier to count, the ducks or the glasses of juice? Why? Show your friend how you counted the glasses of juice.
  - Does your drawing of 10 ones and 2 ones look exactly the same as your friends? How is it the same? How is it different?
  - Write the number 17 on the board. Can someone come up and draw 17 squares on the board?
  - Can someone come up and circle 10? Fill in this sentence for me: 17 is 10 ones and \_\_\_\_ ones.
  - 14 is 10 ones and \_\_\_\_ ones. Fourteen is a teen number. What is another teen number?

Eleven and twelve don't have "teen" but most grown-ups call them teen numbers. What have you noticed today about teen numbers?



#### NOTES ON SCAFFOLDING ELLS:

For students with developing language skills, review academic vocabulary. Before beginning student sharing during the Debrief, count to 20 with the Slavonic abacus to practice pronouncing numbers.

### 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.

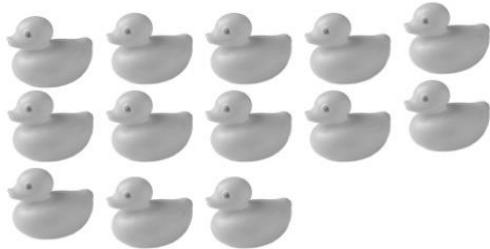
Name \_\_\_\_\_

Date \_\_\_\_\_



I have 10 ones and 2 ones.

Touch and count 10 things. Put a check over each one as you count 10 things.



I have 10 ones and \_\_\_\_ ones.



I have 10 ones and \_\_\_\_ ones.



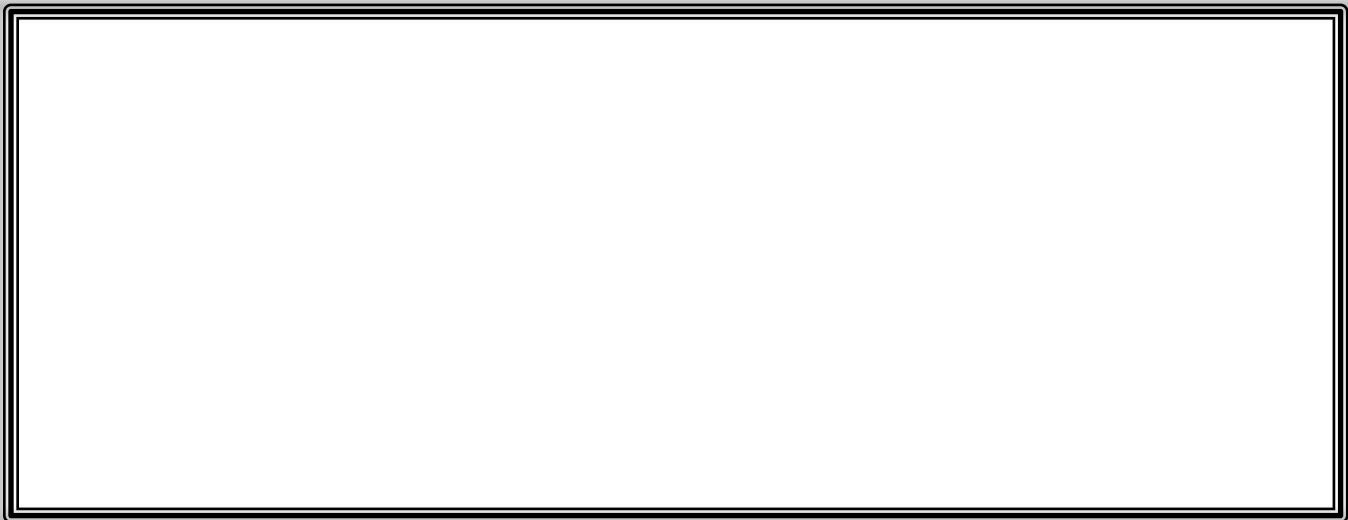
I have \_\_\_\_ ones and \_\_\_\_ ones.



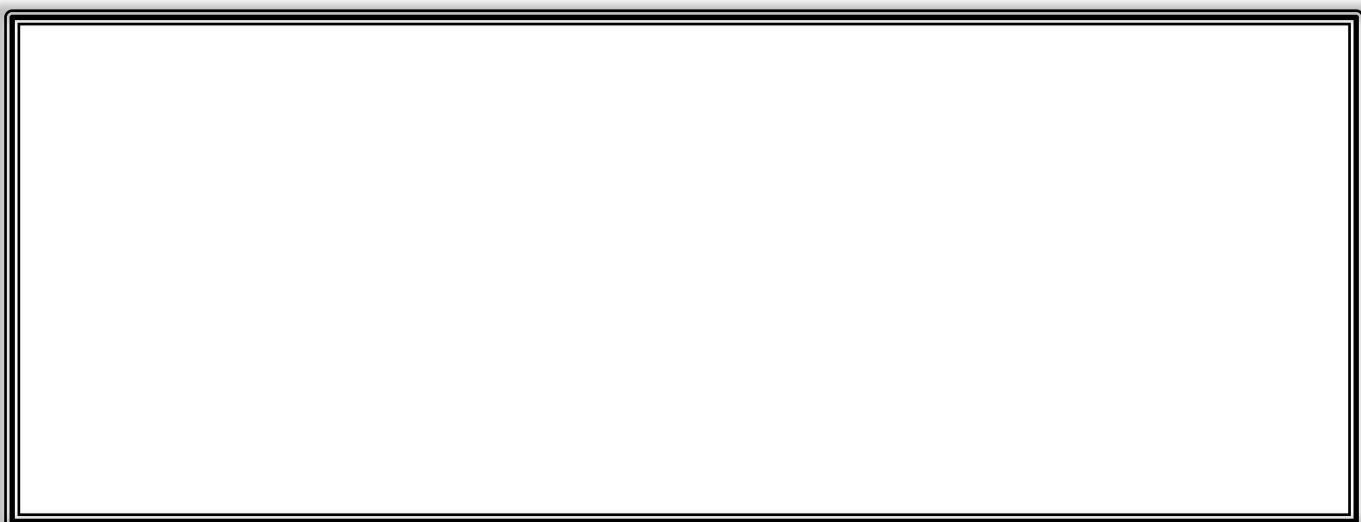
I have \_\_\_\_ ones and \_\_\_\_ ones.

Draw pictures to match the words.

I have 10 small circles and 2 small circles:

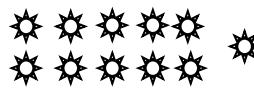


I have 10 ones and 4 ones:



Name \_\_\_\_\_

Date \_\_\_\_\_



10 ones and 3 ones



10 ones and 1 one

Circle the correct numbers that describe the pictures.



10 ones and 3 ones



10 ones and 7 ones



10 ones and 8 ones



10 ones and 5 ones



10 ones and 10 ones



10 ones and 8 ones



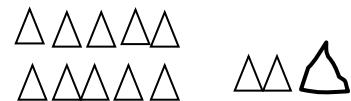
10 ones and 4 ones



10 ones and 2 ones

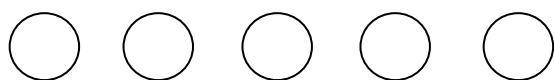
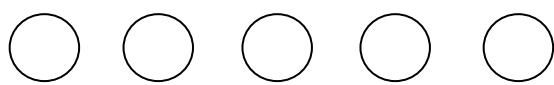
Name \_\_\_\_\_

Date \_\_\_\_\_



10 ones and 3 ones

Draw more to show the number.



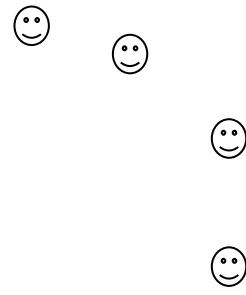
10 ones and 2 ones



10 ones and 5 ones



10 ones and 7 ones



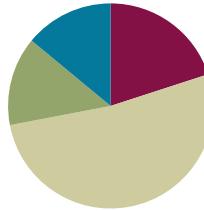
10 ones and 4 ones

## Lesson 3

**Objective:** Count and circle 10 objects within images of 10 to 20 objects and describe as 10 ones and \_\_\_ ones.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (10 minutes)        |
| Application Problem | (7 minutes)         |
| Concept Development | (26 minutes)        |
| Student Debrief     | (7 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (10 minutes)

- Hide 1 **K.CC.2** (4 minutes)
- How Many Do You See? **K.CC.2** (3 minutes)
- Grouping 10 Objects **K.NBT.1** (3 minutes)

#### Hide 1 (4 minutes)

Materials: (T/S) Ten-frame cards

- T: (Show 5.) Use your imagination to hide 1. How many are left?  
S: 4.  
T: (Show 10.) Use your imagination to hide 1. How many are left?  
S: 9.

Continue with the following possible sequence: 1, 6, 2, 7, 3, 8, 4, 9. Have students repeat the activity in pairs if there is time.



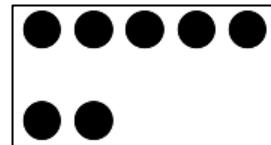
#### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Make instructions visual as well as oral for you English language learners. When instructing students, “Use your imagination to hide 1,” illustrate this process by covering one dot on the ten-frame. Repeat for the first few numbers.

#### How Many Do You See? (3 minutes)

Materials: (T) Ten-frame cards

- T: (Show dots for several seconds then hide the card). Wait for the signal. How many dots did you see?  
S: 7.



T: Who can explain how they see 7?

S: I see a 5 group on top and 2 more on the bottom. (Draw as the student speaks.)

Continue with the following possible sequence: 3, 9, 1, 8, 7, 4.

### Grouping 10 Objects (3 minutes)

Materials: (S) Bag with about 20 small objects for each student

T: Put all the things in your bag on your work mat. Count out 10 ones and move them together into a bunch.

T: (Wait while they work.) By counting, prove to your partner there are 10 things in your bunch.

S: (Count for their partner.)

T: Push all your things back together. Mix them up. Count out 10 ones again and move them together into a bunch.

Repeat process two or three more times. Ask students if the same 10 things are in the bunch each time.

### Application Problem (7 minutes)

Each gingerbread man got 10 sprinkles as buttons with 2 sprinkles to show the eyes. Draw to show the 12 sprinkles as 10 buttons and 2 eyes.

### Concept Development (26 minutes)

Materials: (S) Template with varied images of teen quantities (located at end of lesson materials), cut into strips



#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Challenge above grade level students during the application problem by asking them to draw a 5-group that represents this problem. Ask: "What if each gingerbread man got 1 more chip for the nose?"



T: (Draw two rows of five circles with three more off to the side.)

T: Let's count all the circles.

S: 1, 2, ..., 13.

T: Talk to your elbow partner. Can you count 10 ones in my picture?

S: (Students talk with their partner. Watch for pointing and counting. Expect students to count one at a time. Do not insist they recognize the 2 fives as 10 automatically.)

T: Who can come to the board and show us how they counted 10 ones?

S: (Student comes to the board and designates his 10.)

T: Let's count with him while he points.

S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

T: Are there more?

S: Yes!

T: How many more?

S: 3 more.

T: Use your finger to circle the 10 ones from your seat.

S: (Make circles around the 10 ones with their fingers.)

T: Can you see the 3 ones without counting?

S: Yes!

T: Now find 10 triangles inside this group of triangles.

(Distribute the template strip of triangles pictured to the right.) Find 10 ones and circle them carefully with your finger.

S: (After receiving their paper strip, students count and circle 10 ones with their finger.)

T: Show your partner how you found and circled 10 ones with your finger. Prove to him or her that it is 10 by counting and then circling.

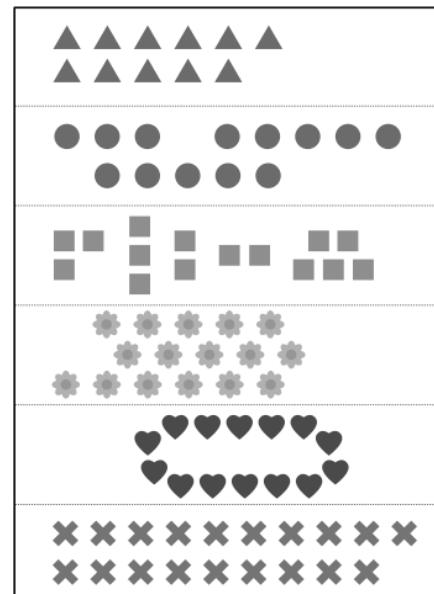
S: (Students do so.)

T: Now use your pencil to find and circle your 10 ones. (Students circle 10 ones.) Trade papers with your partner and count to be sure he circled exactly 10 ones. Be nice if you disagree!

T: How many extra ones did you have after you counted the 10 triangles?

S: 1.

T: When you and your partner are ready, raise your hand for a new picture. Find and circle 10 ones with your finger then with your pencil. Prove your count of 10 ones to your partner. Trade papers with your partner and check their count. (Continue distributing additional strips of teen items from the template).



### Problem Set (8 minutes)

Students should do their personal best to complete the Problem Set within the allotted 8 minutes.

Note: Ask the students to find and circle 10 objects before circling them with their pencil. They are “finding” an embedded number, just as when they were “seeing” seven, they may have seen a 5-group and 2 more. The difference here is that they must count to find 10 ones. Later, in Grade 1, they will recognize certain configurations of 10 ones (such as the ten-frame) as 1 ten.

### Student Debrief (7 minutes)

**Lesson Objective:** Count and circle 10 objects within images of 10 to 20 objects, and describe as 10 ones and \_\_\_\_ ones.

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.

- Did your friend circle the exact same ice cream cones? Apples? Peppers? Tacks?
- Were both your answers correct? Why?
- How did your friend represent 10 ones in her picture?
- How do we say 10 ones and 5 ones (and the other numbers represented) as one number? (The students have been counting to higher numbers during fluency since early in the year. Pre-K standards call for counting to 20.)
- Which pictures were the easiest for you to count? Why?
- What do all these examples have in common? Do 10 ones always look the same? What other things in our classroom could we make into a bunch or pile of 10 ones?

### 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.

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

I have 10 ones and 2 ones.

Count and circle 10 things. Tell how many there are in two parts, 10 ones and some more ones.

I have 10 ones and 5 ones.

I have 10 ones and 2 ones.

I have 10 ones and 0 ones.

I have 10 ones and 10 ones.

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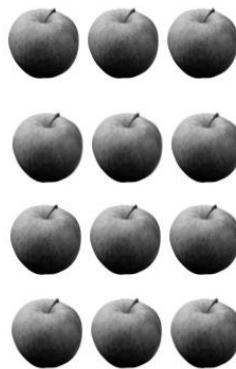


I have 10 ones and 2 ones.

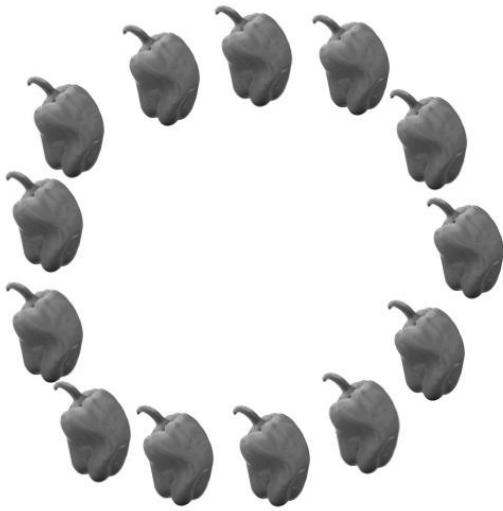
Count and circle 10 things. Tell how many there are in two parts, 10 ones and some more ones.



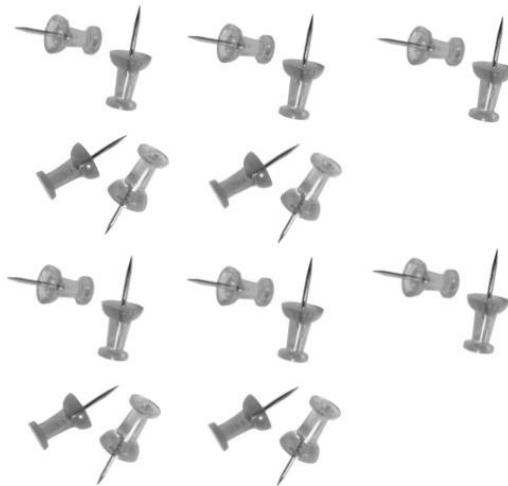
I have 10 ones and \_\_\_\_ ones.



I have \_\_\_\_ ones and \_\_\_\_ ones.



I have \_\_\_\_ ones and \_\_\_\_ ones.



I have \_\_\_\_ ones and \_\_\_\_ ones.

Draw your picture to match the words. Circle 10 ones.

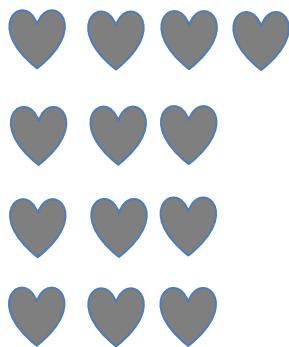
I have 10 ones and 3 ones:

I have 10 ones and 8 ones:

Name \_\_\_\_\_

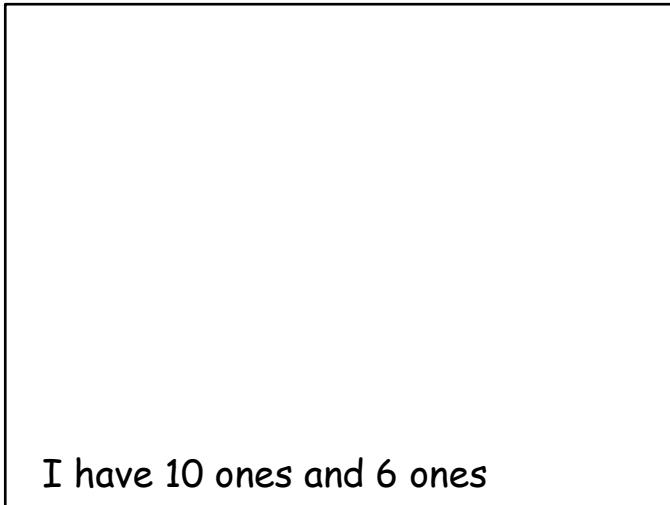
Date \_\_\_\_\_

Circle 10 ones.



I have 10 ones and \_\_\_\_ ones

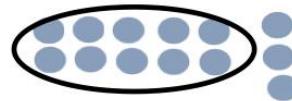
Draw 10 ones and 6 ones.



I have 10 ones and 6 ones

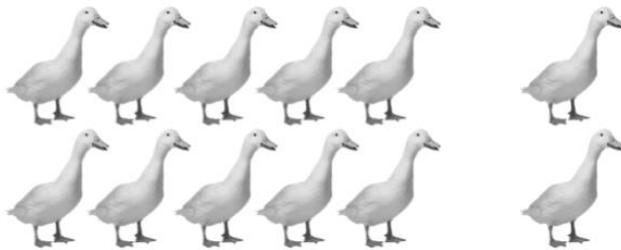
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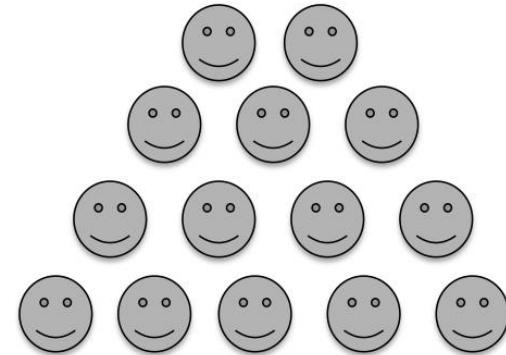


I have 10 ones and 3 ones.

Circle 10 things. Tell how many there are in two parts, 10 ones and some more ones.



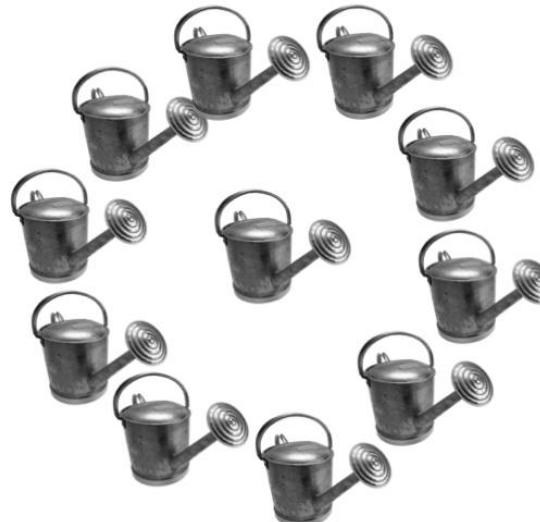
I have 10 ones and \_\_\_\_ ones.



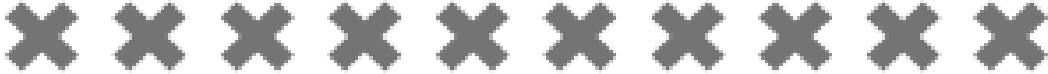
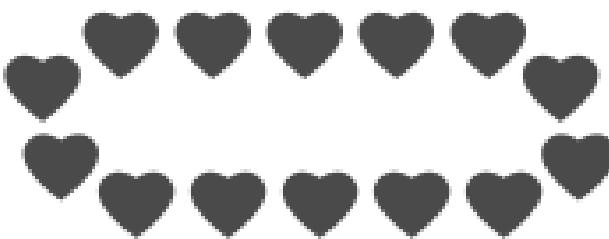
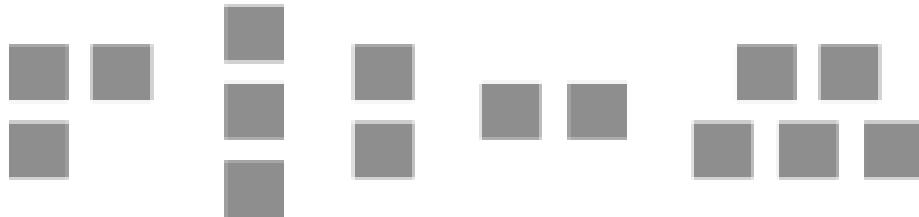
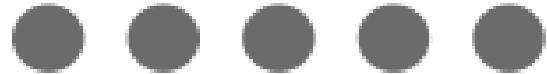
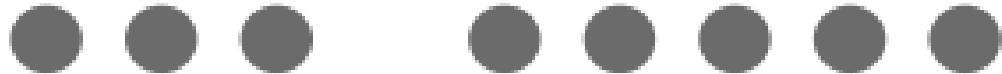
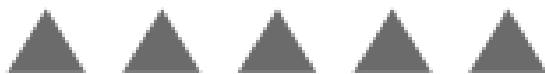
I have 10 ones and \_\_\_\_ ones.



I have \_\_\_\_ ones and \_\_\_\_ ones.



I have \_\_\_\_ ones and \_\_\_\_ ones.

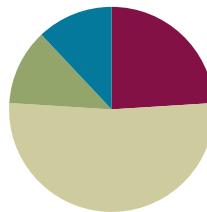


## Lesson 4

**Objective:** Count straws the Say Ten way to 19; make a pile for each ten.

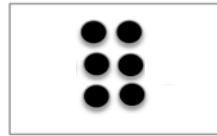
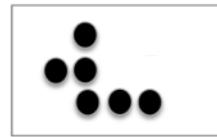
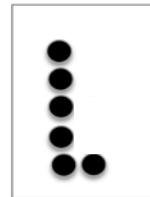
### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (12 minutes)        |
| Application Problem | (6 minutes)         |
| Concept Development | (26 minutes)        |
| Student Debrief     | (6 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (12 minutes)

- Dot Cards of Six **K.CC.2** (4 minutes)
- Number Pairs of Six **K.CC.2** (4 minutes)
- Circling 10 Objects **K.NBT.1** (4 minutes)



### Dot Cards of Six (4 minutes)

Materials: (T/S) Varied dot cards of six

- T: (Show card.) How many do you see?  
 S: 6.  
 T: How did you see them in two parts?  
 S: (Possible answers) 5 up and 1 down, 2 down and 4 up, 3 up and 3 down.

Continue with other cards of seven. Distribute the cards to the students for partner sharing time. Have them pass on the card at a signal.

### Number Pairs of Six (4 minutes)

Materials: (T) Linking cube sticks or dot cards (S) Personal white board

Show a stick of linking cubes or the dot cards with 5 and 1 indicated as parts.

#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Provide your students with disabilities with extra minutes to process your questions before giving the signal to respond. When students are responding chorally, ask them to "show thumbs up when ready" to ensure ample think time.

- T: Say the biggest part. (Give students time to count.)  
 S: 5.  
 T: Say the smallest part.  
 S: 1.  
 T: What is the total number of dots? (Give them time to recount.)  
 S: 6.  
 T: Show the number bond on your personal white board.

Continue with 4 and 2, 3 and 3, and 6 and 0.

### Circle 10 Objects (4 minutes)

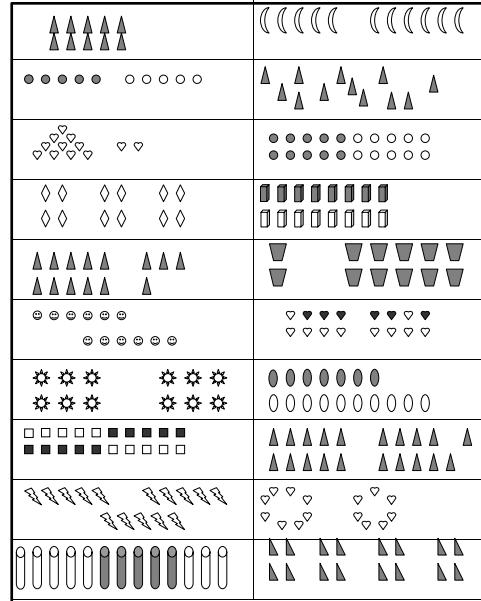
Materials: (S) Circle 10 Objects template (pictured to the right)

Distribute Circle 10 Objects template. Please note that this problem set will be used in the Debrief.

### Application Problem (6 minutes)

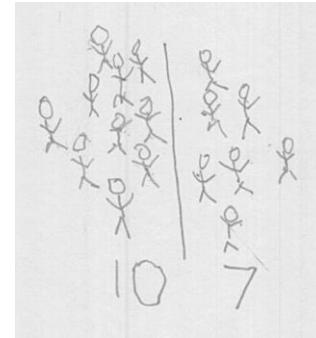
At recess, 17 students were playing. 10 students played handball while 7 students played tetherball. Draw to show the 17 students as 10 students playing handball and 7 students playing tetherball.

Note: In this application problem, students are not adding to solve, but rather they are being guided to decompose the 17 as 10 ones and 7 ones. This is not asking “how many,” but rather separating 17 into 10 ones and some ones (**K.NBT.1**). The problem is not asking them to count the total but is instead telling them the total.



Circle Sets of 10.

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### Concept Development (26 minutes)

Materials: (T) 19 linking cubes (S) 19 straws per pair of students, a bag of 19 small counting objects such as pennies or beans per student, template

- T: Come sit with me on the carpet. (Choose a student helper to sit next to you on the left.)  
 T: (Place a linking cube on each of your fingers.) How many cubes do you see?  
 S: 10!

#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Support your English language learners’ developing academic vocabulary; as students count the Say Ten way, ask them to also tell you the standard number name.

- T: How many?  
 S: Ten one.  
 T: Right. And the regular way?  
 S: Eleven.

- T: (Place a cube on your helper's right pinky finger.) Now how many cubes do you see?  
 S: Eleven! I see 10 and 1!  
 T: You're all correct! Eleven is 10 and 1! I'm going to teach you to count the Say Ten way!  
 T: (With a linking cube on each finger, raise your hands again.) How many linking cubes is this?  
 S: Ten!  
 T: Every time Lucy adds another cube to her fingers we'll Say Ten (show your hands) and the number of ones you see on her fingers. Ready?  
 S: (As helper adds cubes on her fingers from right to left in sequential order up to 19.) Ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight, ten nine.  
 T: Excellent! Now go back to your seats and we'll practice counting the Say Ten way using straws.  
 T: (Pass out 19 straws to each pair of students.) One student, Partner A, will count out 10 straws into a pile. The other student, Partner B, will place one straw next to the pile and we'll say, "ten one." Ready?  
 S: (Showing a pile of 10 straws and 1 more straw.) Ten one.  
 T: Partner B, place another straw next to the pile of 10. How many straws now?  
 S: Ten two.  
 T: (Continue this way up to ten nine.) Put all the straws back into one pile and switch roles. Partner B, count out 10 straws into a pile. Partner A, place 1 straw next to the pile, and let's practice counting again the Say Ten way.  
 S: (Students count up to ten nine.)

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Begin by having the students use concrete materials on the ten-frames of the Problem Set. Have them count the Say Ten way as they work. Direct students to fill the ten-frame on the left, first with one row of 5 from left to right and then the row below from left to right. Remind them that these are like their egg cartons. After doing some examples with materials, have the students then draw and count the specified amounts while they count the Say Ten way.

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

Make the number with materials. Count it the East Asian way.

I can make ten three.  
10 3



I can make ten seven.  
10 7



I can make ten two.  
10 2



I can make ten nine.  
10 9



Note: Early finishers can represent their number pictorially on the ten frame.

## Student Debrief (6 minutes)

**Lesson Objective:** Count straws the Say Ten way to 19; make a pile for each ten.

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

The following is a suggested list of questions to invite reflection and active processing of the total lesson experience. Use those that resonate for you as you consider what will best support your students' ability to articulate the focus of the lesson.

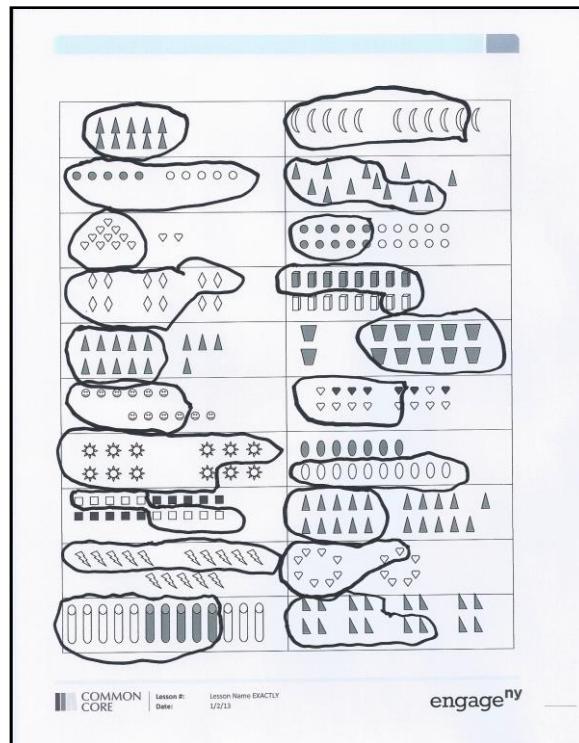
Have students bring their Circle 10 Objects template to the carpet. This is the template from the fluency.

Suggestions for the Debrief:

- Look at your Circle 10 Objects template. Can you say the numbers the Say Ten way?
- Did your friend circle 10 objects the same way you did?
- Were both of your answers correct? Why?
- How do we say ten nine as one number?
- How do we say 16 the Say Ten way?
- Which pictures were the easiest for you to count? Why?
- What do all the pictures have in common?

## 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.

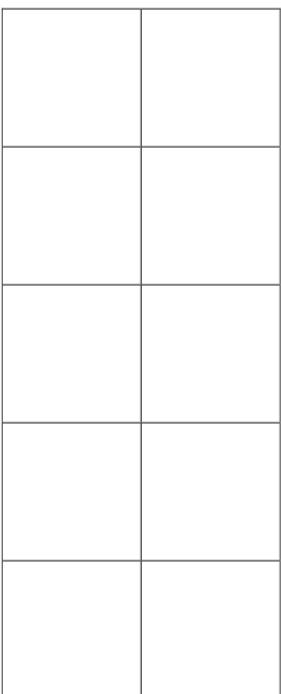
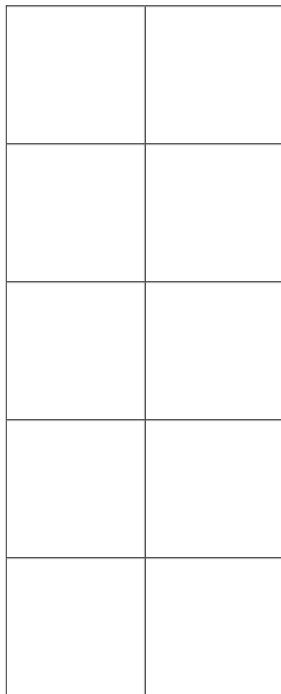


Name \_\_\_\_\_

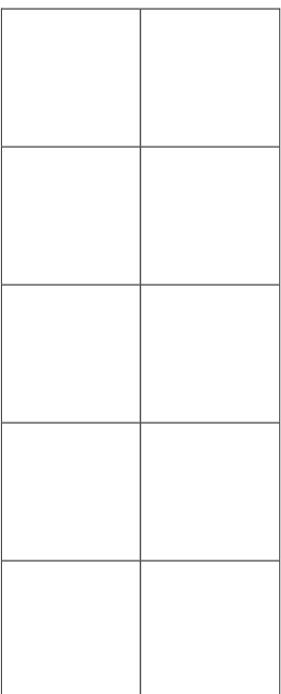
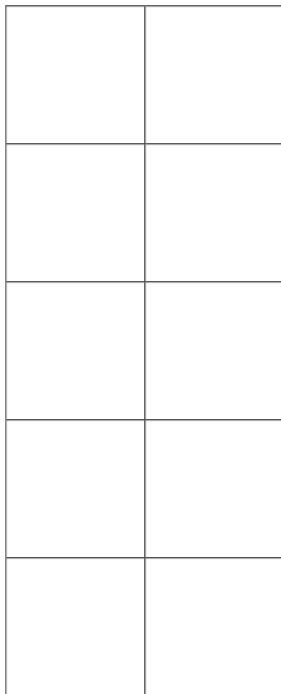
Date \_\_\_\_\_

Draw 10 ones and some tens. Whisper count as you work the Say Ten way.

I can make ten three.  
10    3

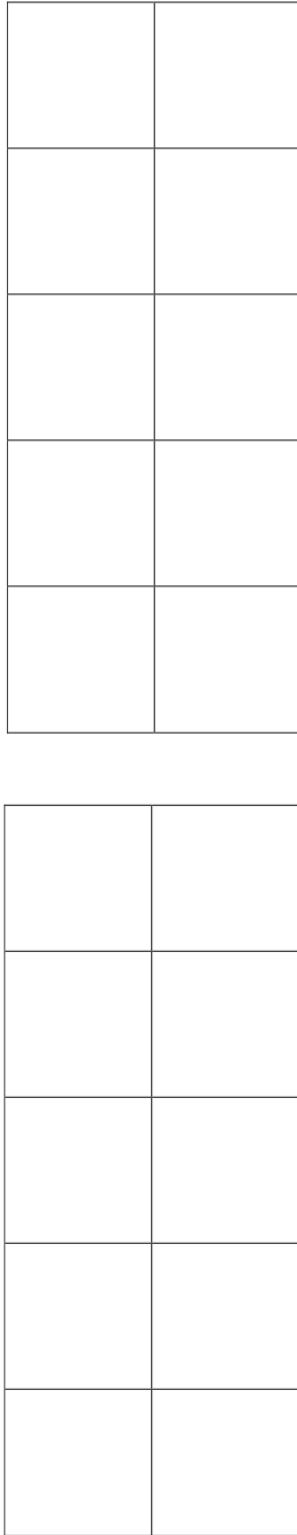


I can make ten seven.  
10    7



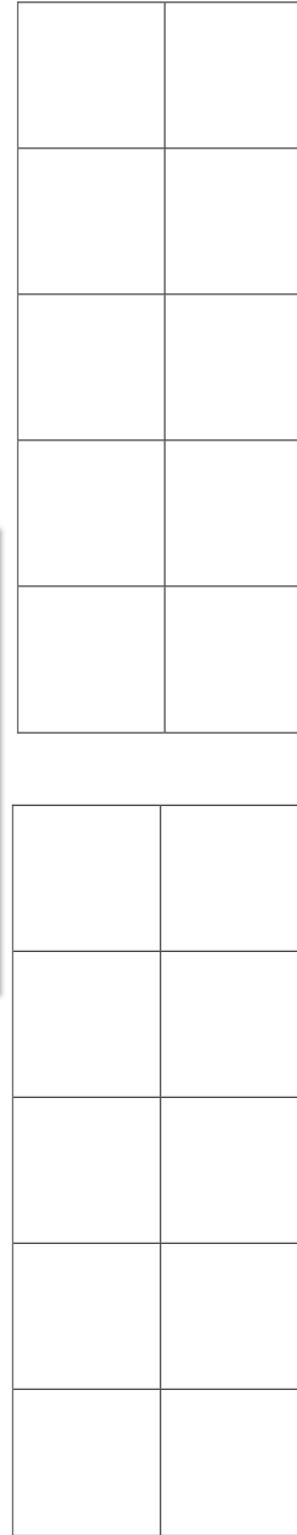
I can make ten two.

10 2



I can make ten nine.

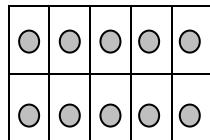
10 9



Note: Early finishers can represent their number pictorially on the ten frame.

Name \_\_\_\_\_

Date \_\_\_\_\_



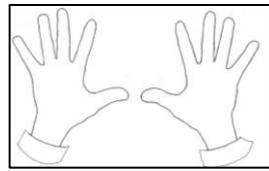
10

3

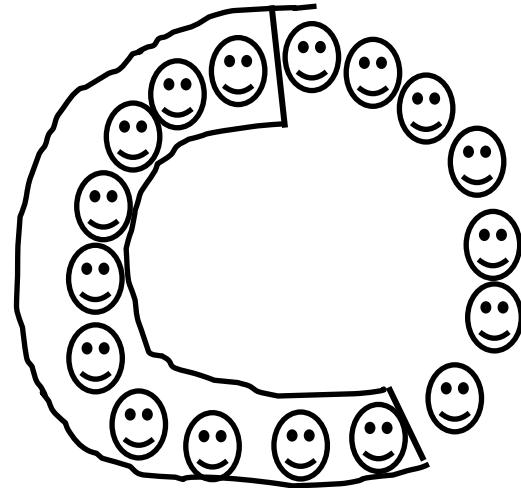
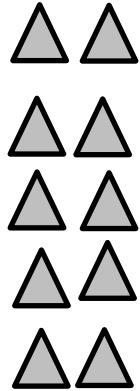
Count and write how many the Say Ten way.



10



10



Name \_\_\_\_\_

Date \_\_\_\_\_

|       |     |
|-------|-----|
| 00000 | XXX |
| 00000 |     |

10    3

Draw lines to match pictures to numbers the Say Ten way.

|       |   |
|-------|---|
| 00000 | X |
| 00000 |   |

10    1

|       |    |
|-------|----|
| 00000 | XX |
| 00000 |    |

10    6

|       |     |
|-------|-----|
| 00000 | XXX |
| 00000 |     |

10    10

|       |       |
|-------|-------|
| 00000 | XXXXX |
| 00000 | X     |

10    2

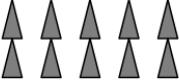
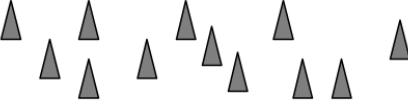
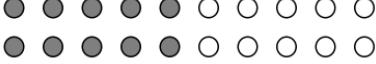
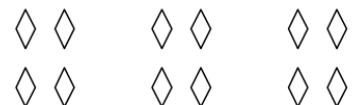
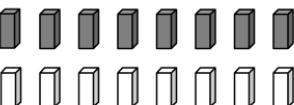
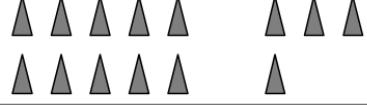
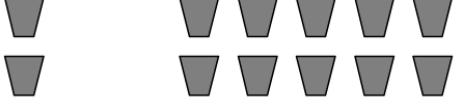
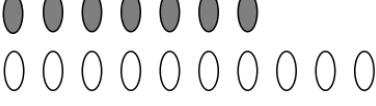
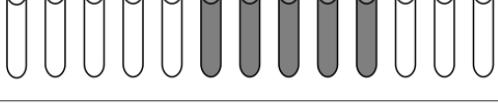
|       |       |
|-------|-------|
| 00000 | XXXXX |
| 00000 | XXXXX |

10    3

Name \_\_\_\_\_

Date \_\_\_\_\_

Circle 10.

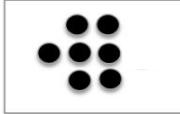
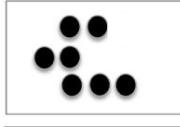
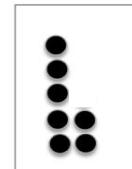
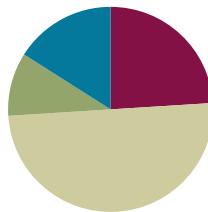
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## Lesson 5

**Objective:** Count straws the Say Ten way to 20; make a pile for each ten.

### 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)

- Dot Cards of Seven K.CC.5, K.CC.2 (4 minutes)
- Number Pairs of Seven K.CC.2 (4 minutes)
- Circling 10 Ones K.NBT.1 (4 minutes)

### Dot Cards of Seven (4 minutes)

Materials: (T/S) Varied dot flashes with 7 dots

- T: (Show 7 dots.) How many do you see (Give students time to count)?  
 S: 7.  
 T: How can you see 7 in two parts?  
 S: (Come up to the card.) “5 here and 2 here.” “I see 3 here and 4 here.”

Continue with other cards of seven. Distribute the cards to the students for partner sharing time. Have them “pass on” the card at a signal.

### Number Pairs of Seven (4 minutes)

Materials: (S) Dot cards (indicate 6 and 1 as two parts), personal white boards



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSIONS:

Students who are below grade level will need to do more counting. They need more time and may benefit from working with the cards one at a time while you move more rapidly through the cards with the larger majority of the class.



#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Let your students who are above grade level work in a small group with more of a flashing approach. Assign one student or classroom helper to be the teacher. Engage them in sharing the different ways they saw the subsets.

- T: Say the biggest part.  
S: 6.  
T: Say the smallest part.  
S: 1.  
T: What is the total number of dots? (Give students time to recount.)  
T: Write the number bond on your personal board. Continue with 5 and 2, 4 and 3, and 7 and 0.

### Circling 10 Ones (4 minutes)

Materials: (S) Circling 10 Ones template (pictured to the right)

### Application Problem (5 minutes)

Pat covered 16 holes when playing the flute. She covered 10 holes with her fingers on the first note she played. She covered 6 holes on the next note she played. Draw the 10 holes. Draw the six holes. Use your drawing to count all the holes the Say Ten way.

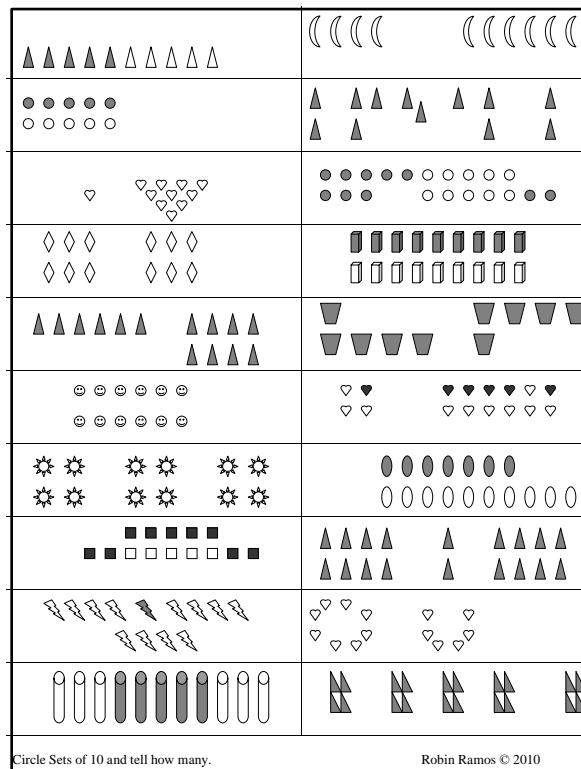
Note: The focus here is on counting to find the total rather than on addition. They are also seeing the embedded 10 and 6 as they count to 16 the Say Ten way.

### Concept Development (25 minutes)

Materials: (S) 20 straws per pair of students

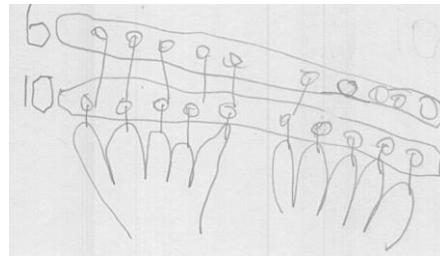
- T: Come sit with me on the carpet.  
T: I'm going to flash numbers with my hands. Tell me the number, then tell me the number the Say Ten way. Let's do one as an example.  
T: (Hold out both hands, palms out, to show 10, then show your right hand with the pinky extended.)  
S: Eleven.  
T: The Say Ten way?  
S: Ten one!  
T: Perfect. (Show 10 again, then show 2 on your right

MP.7



Circle Sets of 10 and tell how many.

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#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSIONS:

Support your English language learners by using gestures as you teach the lesson. Flash 10 and gesture with your hands for the word. Flash 1. Gesture again for the word. This engages students to figure out your intent and bypasses all the potential confusion in oral directions.

**MP.7**

- hand with the pinky and ring finger.)
- S: Twelve! Ten two!
- T: Yes!
- T: (Continue this way up to ten nine.) What comes after 19? (Flash 2 tens.)
- S: Twenty! Two tens!
- T: Very good! Please return to your seats and we'll practice counting the Say Ten way using straws. Partner A will count 10 straws into a pile. The other student, Partner B, will place one straw next to the pile and say "ten one." Ready?
- S: (Showing a pile of 10 straws and 1 one.) Ten one.
- T: Partner B, place another straw. How many straws now?
- S: Ten two.
- T: (Continue this way up to 2 ten.) How many straws are there?
- S: 2 ten!
- T: You are all correct! There are 2 piles of 10 straws. We say "two ten."
- T: Put all the straws back into one pile and switch roles. Partner B, count out 10 straws into a pile. Partner A, place one straw next to the pile, and let's practice counting again the Say Ten way.
- S: (Students count up to two ten.)

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

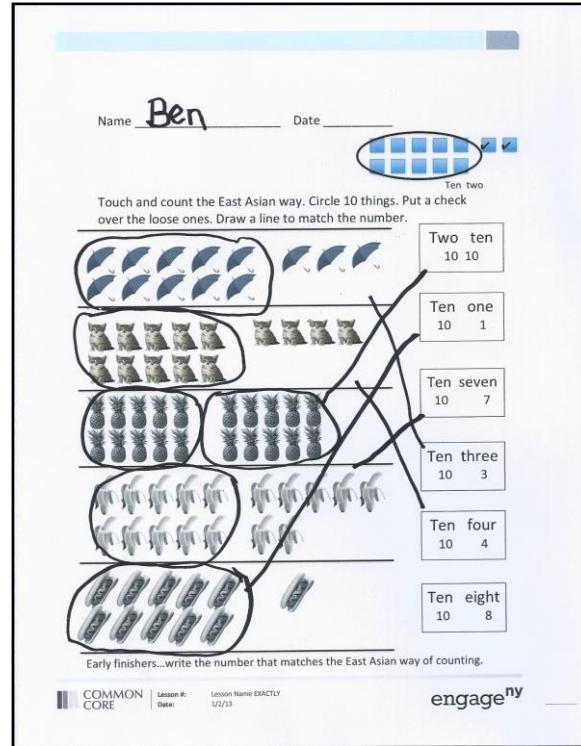
Direct the students to circle 10 objects and check the extra ones. Have them count the total using the Say Ten way. Watch to see that they count the 10 ones within the circle first from left to right, row by row. They then match the drawing to its numerical representation.

### Student Debrief (8 minutes)

**Lesson Objective:** Count straws the Say Ten way to 20; make a pile for each ten.

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

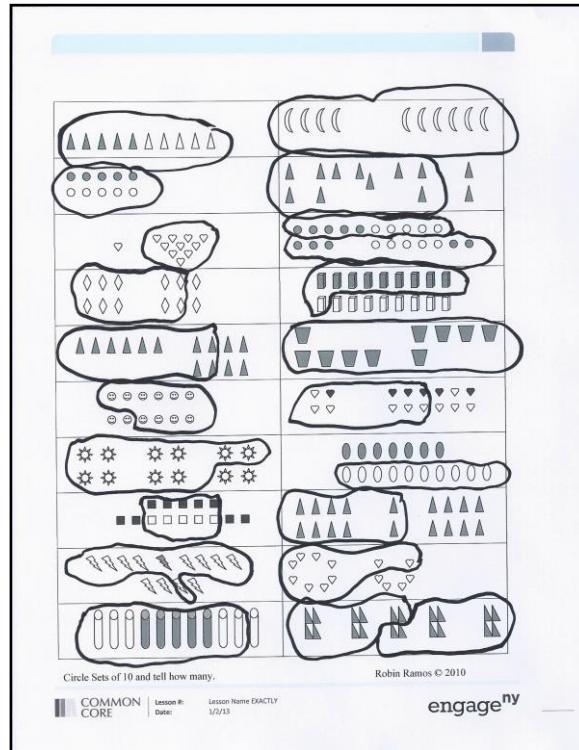
Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson. You may choose to use any combination of the questions below to lead the discussion.



- Look at your Circling 10 Ones template. Can you say the numbers the Say Ten way?
- Did your friend circle 10 ones the same way you did?
- Were both your answers correct? Why?
- How do we say two ten as one number?
- How do we say 17 the Say Ten way?
- Which pictures were the easiest for you to count? Why?
- Look at your Problem Set. Tell your partner what makes it easy for you to count?
- What is the same about all of the pictures? What is different?

### Exit Ticket (3 minutes)

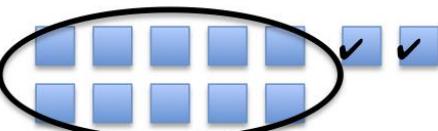
After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.



Name \_\_\_\_\_

Date \_\_\_\_\_

|     |     |
|-----|-----|
| Ten | two |
| 10  | 2   |



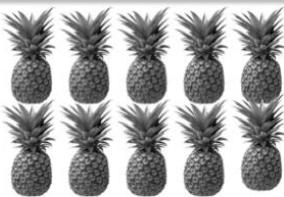
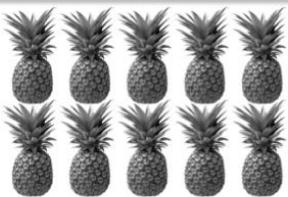
Circle 10 things. Touch and count the Say Ten way. Count your 10 ones first.  
Put a check over the loose ones. Draw a line to match the number.



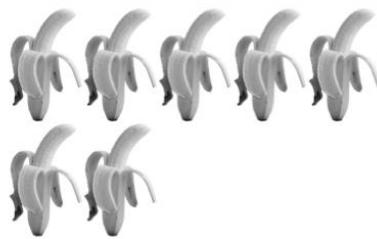
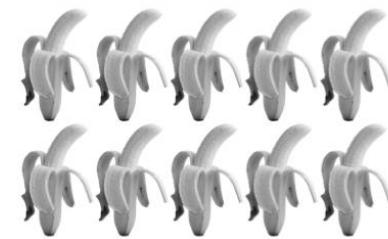
|     |     |
|-----|-----|
| Ten | one |
| 10  | 1   |



|     |       |
|-----|-------|
| Ten | seven |
| 10  | 7     |



|     |       |
|-----|-------|
| Ten | three |
| 10  | 3     |



|     |      |
|-----|------|
| Ten | four |
| 10  | 4    |



|     |     |
|-----|-----|
| Two | ten |
| 10  | 10  |

|     |       |
|-----|-------|
| Ten | eight |
| 10  | 8     |

Name \_\_\_\_\_

Date \_\_\_\_\_

Write and whisper the missing numbers.

Count the Say Ten way from 11 to 20.

|                        |                        |                    |                        |                         |
|------------------------|------------------------|--------------------|------------------------|-------------------------|
| <u>10</u> and <u>1</u> | <u>10</u> and <u>2</u> | <u>10</u> and ____ | <u>10</u> and <u>4</u> | <u>10</u> and ____      |
| <u>10</u> and <u>6</u> | ____ and ____          | ____ and ____      | ____ and ____          | <u>10</u> and <u>10</u> |

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

Write the numbers that go before and after, counting the Say Ten way.

| BEFORE   | NUMBER   | AFTER    |
|----------|----------|----------|
| 10 and 3 | 10 and 4 | 10 and 5 |
| and      | 10 and 2 | and      |
| and      | 10 and 5 | and      |
| and      | 10 and 6 | and      |
| and      | 10 and 1 | and      |
| and      | 10 and 9 | and      |

Name \_\_\_\_\_

Date \_\_\_\_\_

Circle sets of 10 and tell how many.

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Circle Sets of 10 and tell how many.

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## Topic B

# Compose Numbers 11–20 from 10 Ones and Some Ones; Represent and Write Teen Numbers

**K.CC.3, K.NBT.1, K.CC.1, K.CC.2, K.CC.4a, K.CC.4b, K.CC.4c, K.CC.5**

|                               |         |   |
|-------------------------------|---------|---|
| <b>Focus Standard:</b>        | K.CC.3  | Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).  |
|                               | K.NBT.1 | Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. |
| <b>Instructional Days:</b>    | 4       |   |
| <b>Coherence -Links from:</b> | GPK–M5  | Write Numerals to 5, Addition and Subtraction Stories, Count to 20  |
| <b>-Links to:</b>             | G1–M2   | Place Value, Comparison, Addition and Subtraction of Numbers to 20  |

In Topic B, students advance to a more abstract level, representing the decomposition of teen numbers first with Hide Zero cards (Place Value cards) and in Lesson 2 with number bonds. They then work from the abstract to the concrete and pictorial in Lessons 8 and 9 as they are directed to “show (and in Lesson 9 draw) me this many cubes (as teacher displays 13).”

Application problems in Topic B are experiences with decomposition and composition of teen numbers (**K.NBT.1**) rather than word problems (**1.OA.2**). For example, in Lesson 6, the problem reads, “Gregory drew 10 smiley faces and 5 smiley faces. He put them together and had 15 smiley faces. Draw his 15 smiley faces as 10 smiley faces and 5 smiley faces.” In this instance, there is no unknown. We do not ask, “How many in all?” or “How many?” within a word problem setting. The students represent 15 with their Hide Zero cards both when the zero is hiding and when it is not hiding as they apply all their experiences from Topic A to deeply understand the meaning of the digit 1 in the tens place in teen numbers.

**A Teaching Sequence Towards Mastery of Composing Numbers 11–20 from Ones and Some Ones; Represent and Write Teen Numbers**

**Objective 1:** Model with objects and represent numbers 10 to 20 with place value or Hide Zero cards.  
(Lesson 6)

**Objective 2:** Model and write numbers 10 to 20 as number bonds.  
(Lesson 7)

**Objective 3:** Model teen numbers with materials from abstract to concrete.  
(Lesson 8)

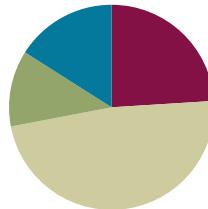
**Objective 4:** Draw teen numbers from abstract to pictorial.  
(Lesson 9)

## Lesson 6

**Objective:** Model with objects and represent numbers 10 to 20 with place value or Hide Zero cards.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (12 minutes)        |
| Application Problem | (6 minutes)         |
| Concept Development | (24 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (12 minutes)

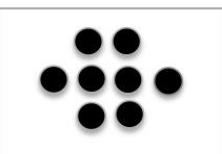
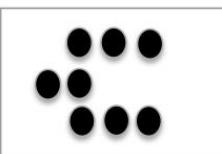
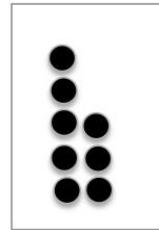
- How Many More to Make 10? **K.CC.2** (4 minutes)
- Dot Cards of Eight **K.CC.5, K.CC.2** (4 minutes)
- Counting Straws the Say Ten Way **K.CC.2** (4 minutes)

### How Many More to Make 10? (4 minutes)

Materials: (T/S) Ten-frame cards

- T: (Show 5.) How many dots?  
 S: 5.  
 T: How many more does 5 need to make 10?  
 S: (Full sentence.) 5 needs 5 more to make 10.

Continue with the following possible sequence: 9, 8, 7, 6, 1, 4, 3, 9, 2, 5.  
 Allow students to play with a partner briefly.



### Dot Cards of Eight (4 minutes)

Materials: (T/S) Varied dot cards of Eight (examples to the right)

- T: (Show a card with 8 dots.) How many dots do you count? Wait for the signal to tell me.  
 S: 8.  
 T: How can you see them in 2 parts?

- S: (Students come up to the card.) “I saw 4 here and 4 here.” “I saw 5 here and 3 here.” “I saw 6 here and 2 here.”

Repeat with other cards. Pass out the cards for students to work independently.

### Counting Straws the Say Ten Way (4 minutes)

Materials: (T) One full ten-frame and cards for numbers 1-10 (S) One full ten-frame and cards for numbers 1-10 for each pair of students

- T: (Show 10 and 3.) Say the number the Say Ten way.

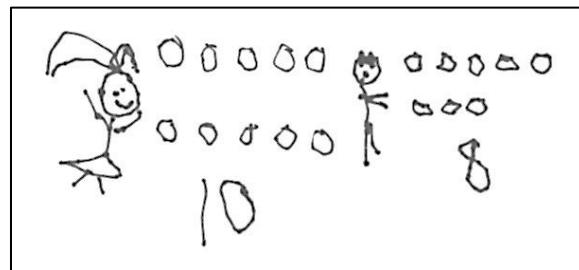
- S: Ten three.

Repeat process with other teen numbers. Give the students time to practice this exercise with a partner briefly.

### Application Problem (6 minutes)

There are 18 students, 10 girls and 8 boys. Show the 18 students as 10 girls and 8 boys.

Note: Remember that the focus is on counting all to find the total rather than counting on or addition.



### Concept Development (24 minutes)

Materials: (T) Hide Zero Cards: one 10 card and numerals 1–9 (S) Hide Zero Cards: one 10 card and numerals 1–9 for each pair of students, two sets of 10 linking cubes for each student (10 in one color and 10 in another color), personal ten-frame boards for each pair of students

- T: Have one color of your cubes represent the boys and one the girls from our story. Show me the boys and girls that were in school. When you are done, check your partner’s work to be sure you agree.
- T: (Once complete). Everyone hold up the stick that represents the girls. (Students do so.) Hold up the stick that represents the boys. (Students do so.)
- T: How many girls?
- S: 10 girls.
- T: Show the girls. (Students show again.) Here is the number 10. (Show the 10 card.)
- T: How many boys?

#### NOTES ON MULTIPLE MEANS OF REPRESENTATIONS:

Support English language learners by matching the linking cubes to the quantity and picture of the girls and boys from the application solution. This way when asked, “What color is represented by the girls?” and “What color is represented by the boys?”, students will already know the answer and can focus on answering mathematical questions.

S: 8 boys.

T: Show the boys. (Students show again.) Here is the number 8. (Show the 8 card.)

T: Put the boys together with the girls. Count with your partner the Say Ten way how many students you have.

S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight. (Have early finishers count down to 1 from 18.)

T: How do we say the number of students the Say Ten way?

S: Ten eight!

T: Watch this magic. Here is my 10. Here is my 8. I push them together and I have ten eight! This is how we write ten eight. (Pull the cards apart and push them together a few times.)

T: Talk to your partner. What happened to the 0 of the 10 ones?

S: "It went under the 8." "It disappeared." "It isn't there anymore." "It is hiding."

T: Yes! It is hiding. I'm going to write the number without the cards. (Write '18'). It is like there is a 0 hiding under this 8.

T: I want each student to write this number on their personal board. When I say to show me your board, show me.

T: Here is a bag with a set of these cards for you. Partner A, open the bag and put all the numbers on your work mat. With your partner, put them in order from 1 to 10. (Wait.)

T: Partner B, show me ten eight with your cards. Be sure to hide the zero!

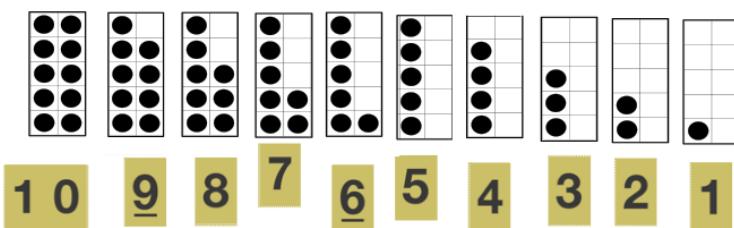
T: Partner A, on this first turn you will use the blocks. Partner B, you will use the cards and write the number on your personal board.

T: Partners, show me ten one.

T: Partner B use the blocks and Partner A use the cards. Show me ten five.

Continue the activity using other numbers. Different groups might work at varying speeds.

After about four different numbers, change the mode of representation from linking cubes to ten-frame cards, the same ones used during fluency practice. Have them place the cards in order from 10 to 1 for variety and repeat the process with about four more numbers.



**Problem Set (7 minutes)**

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Have students use their Hide Zero cards while doing the Problem Set, drawing the number represented and then writing the teen number.

Early finishers can be given another number to represent both pictorially and with cards on the back.

**Student Debrief (8 minutes)**

**Lesson Objective:** Model with objects and represent numbers 10 to 20 with place value or Hide Zero cards.

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.

Introduce the cards as Hide Zero cards. Then possibly discuss:

- Why do you think we call these cards Hide Zero cards?
- How is the number made by the Hide Zero cards different from and the same as the number written with pencil?
- How do the cards help you to understand the number 13? 18?
- If you didn't know the 0 was hiding, you might think the '1' in 13 was equal to 1 instead of 10. Then the total value would be 4 because  $1 + 3$  is 4!

**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.

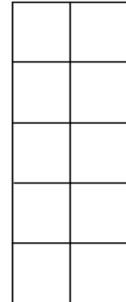
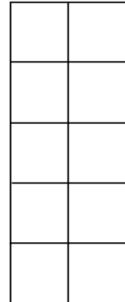
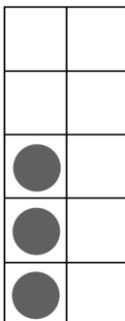
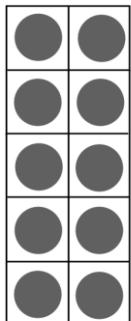

**NOTES ON  
MULTIPLE MEANS OF  
ACTION AND  
EXPRESSIONS:**

Below grade level students will benefit from additional hands-on time with a Rekenrek. Look for opportunities to give them control of the movement of the beads. They may move the beads slowly and erratically. This allows students to hold a number in their minds and wait for the movement of the bead rather than simply rote count.

Name \_\_\_\_\_

Date \_\_\_\_\_

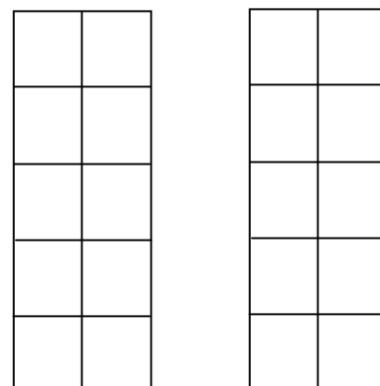
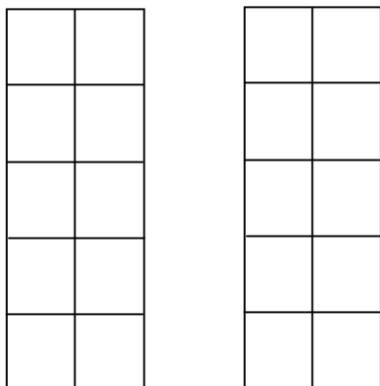
Write and draw the number. Use your Hide Zero cards to help you.



1 0      3

1 3

1 0      5



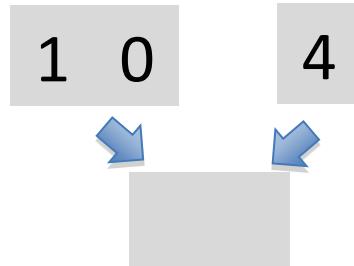
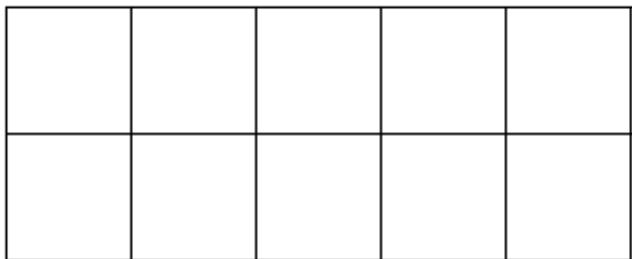
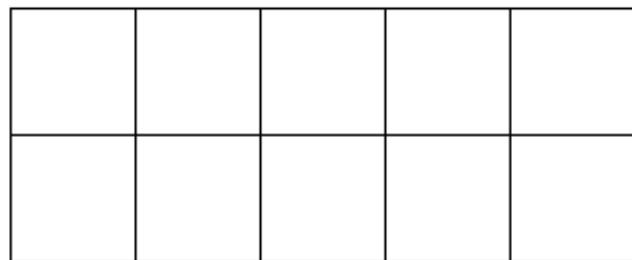
1 0      8

1 0      6

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

Match the number shown on the Hide Zero cards with a drawing in the ten-frame. Write the number below after the 0 is hidden.

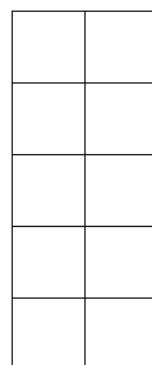
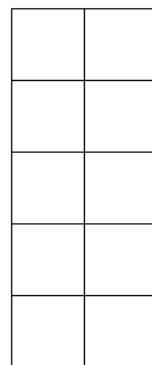
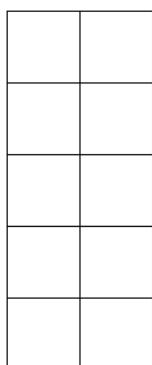
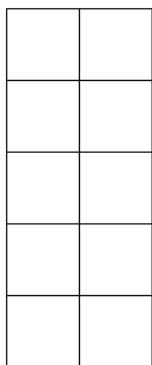
Show the number again on the right with a count of 10 ones and 4 ones. Circle the 10 ones.



Name \_\_\_\_\_

Date \_\_\_\_\_

Write and draw the number. Use your Hide Zero cards to help you.



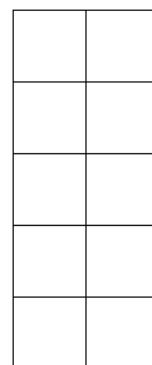
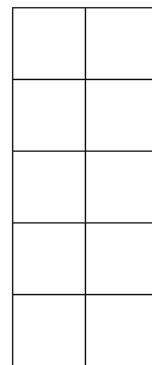
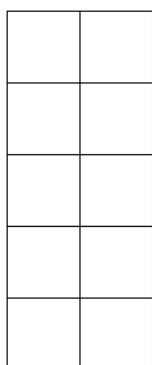
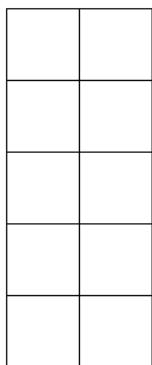
1 0

2



1 0

7



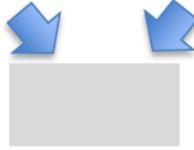
1 0

9



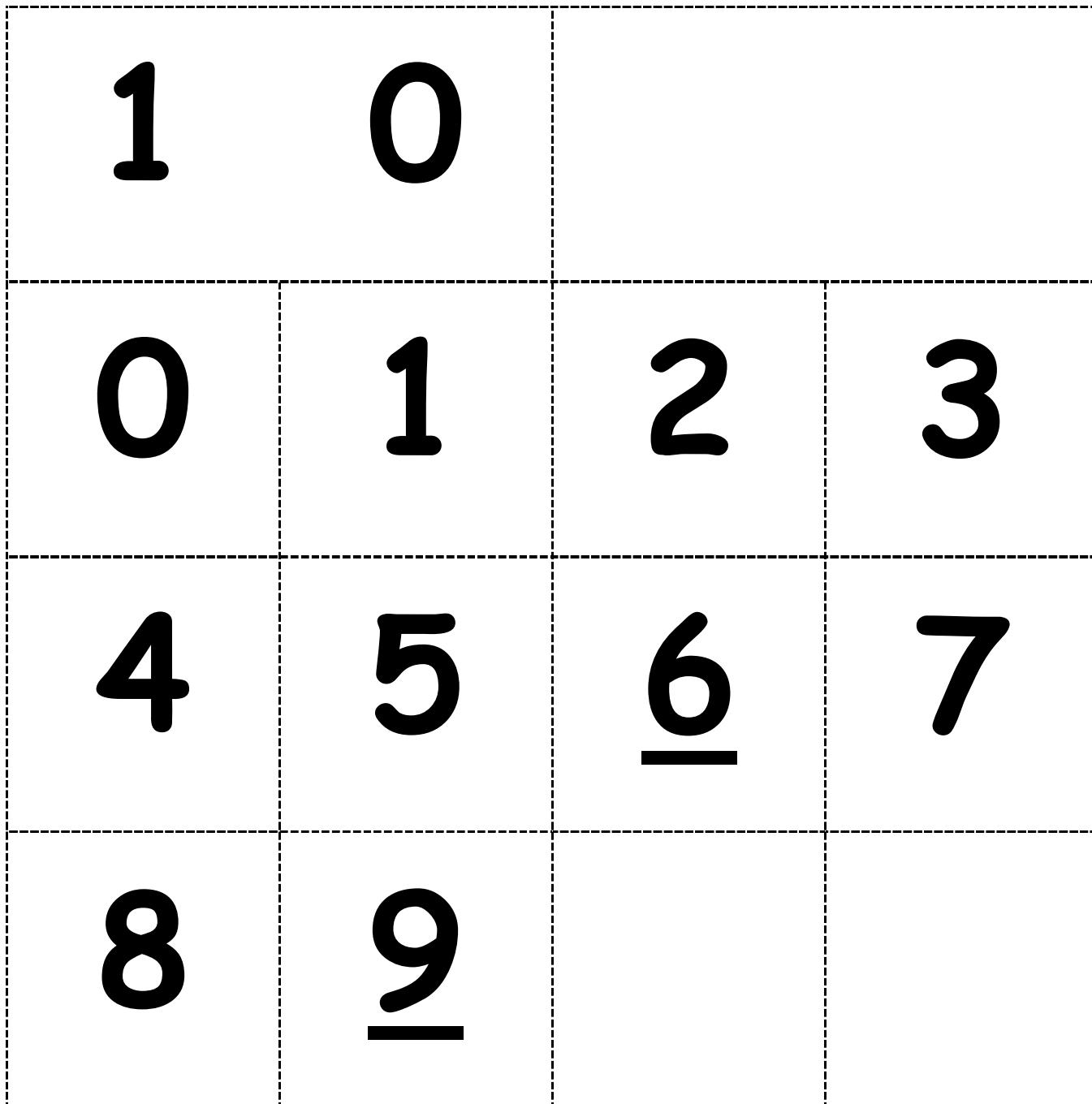
1 0

4



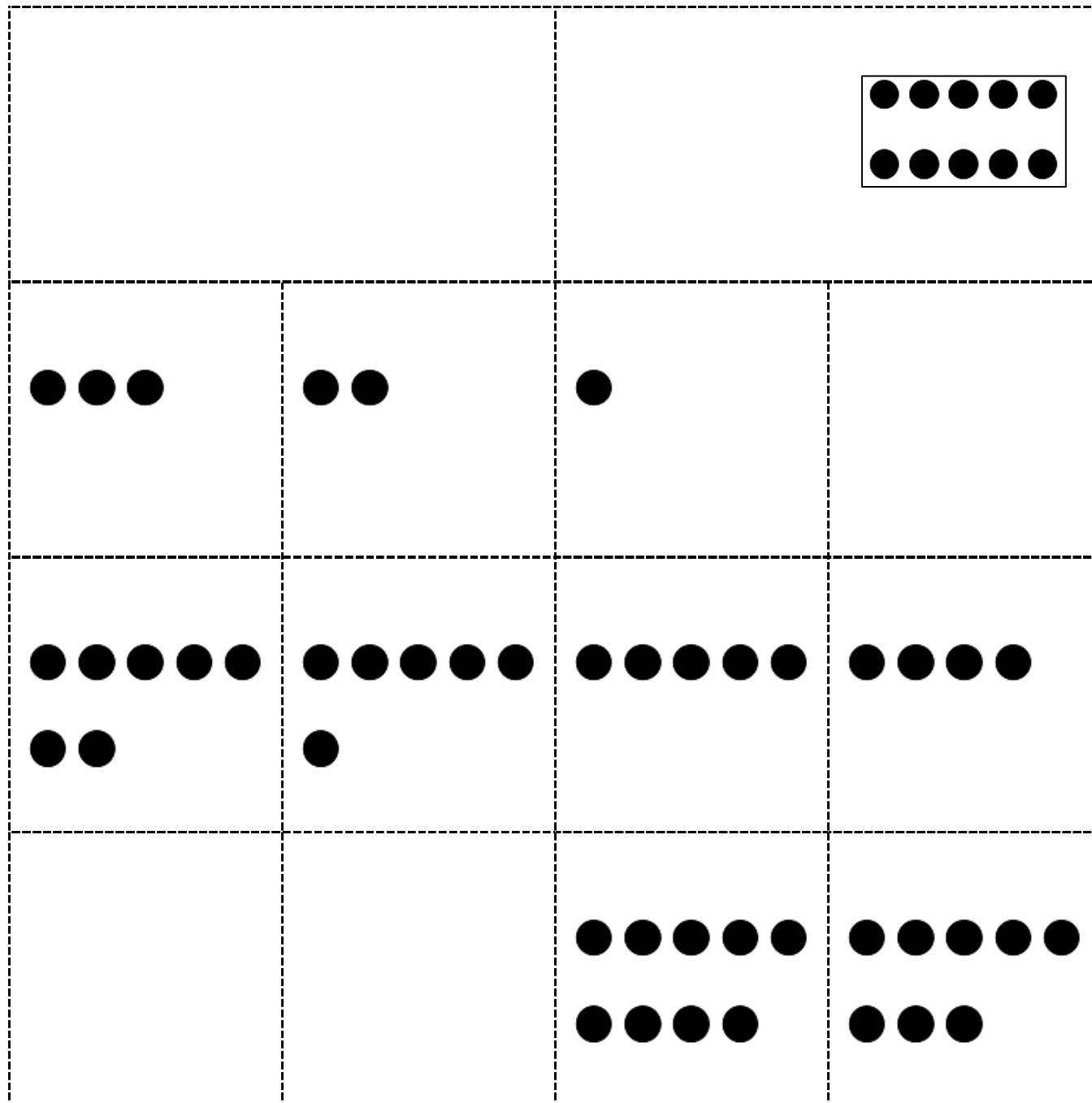
Hide Zero Cards. Copy double-sided.

Numerals



Hide Zero Cards. Copy double-sided.

5-groups

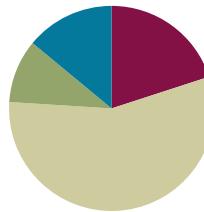


## Lesson 7:

**Objective:** Model and write numbers 10 to 20 as number bonds.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (10 minutes)        |
| Application Problem | (5 minutes)         |
| Concept Development | (28 minutes)        |
| Student Debrief     | (7 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (10 minutes)

- Dot Cards of Eight **K.CC.5, K.CC.2** (4 minutes)
- Counting **K.CC.2** (3 minutes)
- Decompose Teen Numbers **K.NBT.1** (3 minutes)

### Dot Cards of Eight (4 minutes)

Materials: (T) Varied dot cards of Eight (examples to the right)

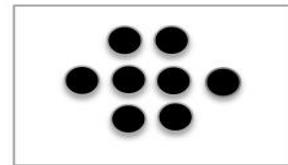
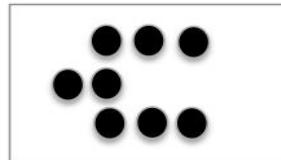
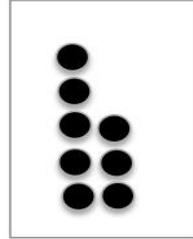
T: (Show a card with 8 dots.) How many dots do you count? Wait for the signal to tell me.

S: 8.

T: How can you see them in 2 parts?

S: (Students come up to the card.) “I saw 4 here and 4 here.” “I saw 5 here and 3 here.” “I saw 6 here and 2 here.”

Repeat with other cards. Pass out the cards for students to work independently.



### Counting (3 minutes)

Partners hover their hands as if playing the piano. Student on the right begins by “playing” the pinky of the left hand and continuing from left to right. Once a finger is counted it remains down on the keyboard.

Students count their own and their partner’s fingers first the Say Ten way, ten one, ten two, etc. and then in standard form. Have them count down from 20 to 0 if they finish early.

## Decompose Teen Numbers (3 minutes)

Materials: (T) Hide Zero cards (Emphasize the breaking apart of numbers by separating the cards as the students say number the Say Ten way and the regular way.)

T: (Showing 12.) Say the number the regular way.

S: 12.

T: Say 12 the Say Ten way.

S: Ten two.

Continue with the following possible sequence: 13, 14, 19, 11, 10, 15, 17, 16, 18.

## Application Problem (5 minutes)

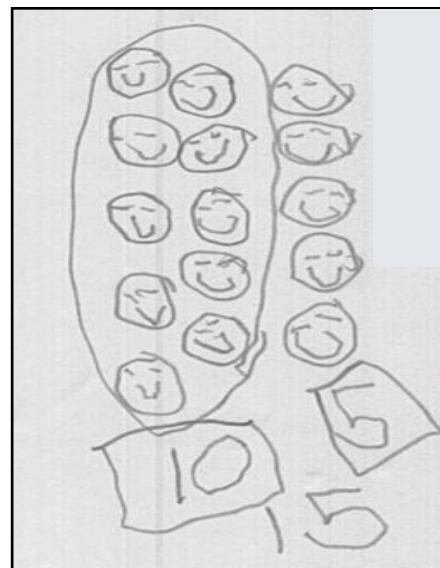
Gregory drew 10 smiley faces and 5 smiley faces. He put them together and had 15 smiley faces. Draw the 15 smiley faces as 10 smiley faces and 5 smiley faces. Then draw 15 with Hide Zero cards when the zero is hiding and when the zero is not hiding.

Note: Word problems involving quantities above 10 begin in Grade 1. Many of the application problems in Module 5 are simply decomposition and composition experiences (**K.NBT.1**). Note that the problems do not ask, “How many in all?” or “How many?” Also note that there is no unknown in problems of this type.



 **NOTES ON  
MULTIPLE MEANS OF  
ENGAGEMENT:**

If below grade level students have difficulties with the Application Problem, pair them with a partner or put them in a small group to solve the problem. Form a small group, and assign “jobs” for each participant to hold each accountable.



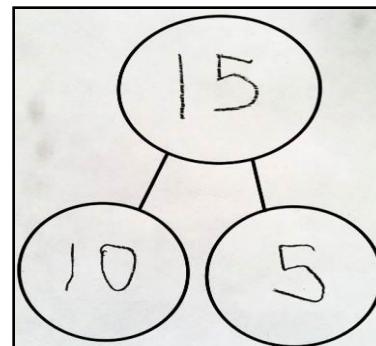
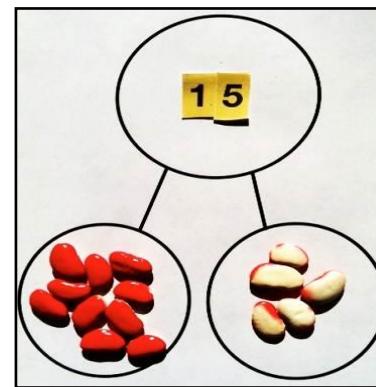
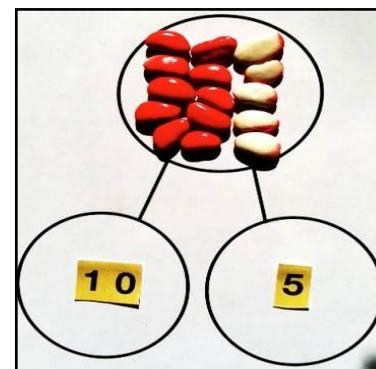
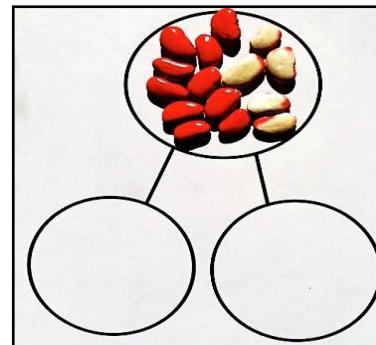
## Concept Development (28 minutes)

Materials: (T/S) Place Value Cards: one 10 ten and numerals 1–9 both for the teacher and for each pair of students, at least 20 two-sided counters for each pair of students in a clear plastic bag (white beans spray painted red on one side, commercial two-sided counters, etc.), number bond template within a personal white board

 **NOTES ON  
MULTIPLE MEANS OF  
REPRESENTATION:**

Scaffold the lesson for English language learners by introducing the terms “total” and “part”. Use pictures of other visual aids of a total and a part. Post the words with the visual on the word wall so that students can continuously refer to them.

- T: Here is Greg's number with my Hide Zero Cards.
- T: Show Greg's number with your 2-sided counters in the "total place" of your number bond. Make 10 ones a different color from the other ones.
- S: (Students do so.)
- T: Our number bond is not complete! We haven't shown the parts!
- T: What number parts are made by the two colors?
- S: 10 ones and 5 ones.
- T: Show those 2 parts with your own Hide Zero cards.
- T: (See the picture at the right.) Is 15 beans the same number as 10 and 5?
- S: (Give the students time to recount.) Yes.
- T: Now our number bond is correct!
- T: Let's switch it. Slide your counters down to be the two parts, 10 ones in a part and 5 ones in a part.
- T: Show fifteen with your Hide Zero cards in the total place of your number bond.
- T: Does 15 tell us the total number of beans in the 2 parts?
- S: (Give students time to count.) Yes.
- T: Now our number bond is correct again!
- T: Let's replace the Hide Zero cards with a written number. Slide the cards off the total place. What number will you write?
- S: 15.
- T: Slide off your beans from the parts. What numbers will you write to take their place?
- S: 10 and 5.
- T: Is 15 the same as 10 and 5?
- S: Yes.
- T: What is the total?
- S: 15 (or ten 5).
- T: What are the parts?
- S: 10 and 5.
- T: They are equal! Our number bond is correct again!
- T: Use your beans and Hide Zero cards to make number bonds that are correct.



Repeat the sequence with different numbers of beans. Let the students go to work independently as they are able while guiding a smaller group that still needs guided practice. Do not let the equality be unresolved. For example, their number bond is not correct if they have 10 beans and 5 beans but nothing in the total place.

**MP.4**

The parts must always be equal to the total. Students may realize they can switch the order of the 10 ones and extra ones. That is good!

Close the session by having students write a number bond without using the template. This is review from Module 4 where they learned about the “total place” and how to draw a number bond.

### Problem Set (8 minutes)

Students should do their personal best to complete the Problem Set within the allotted 8 minutes.

Be sure that students whisper speak as they work. For example, when saying “ten two,” they write the 1 and then the 2. By saying “ten two” simultaneously, they internalize the meaning of the ‘1’ as standing for 10 ones.

### Student Debrief (7 minutes)

**Lesson Objective:** Model and write numbers 10 to 20 as number bonds.

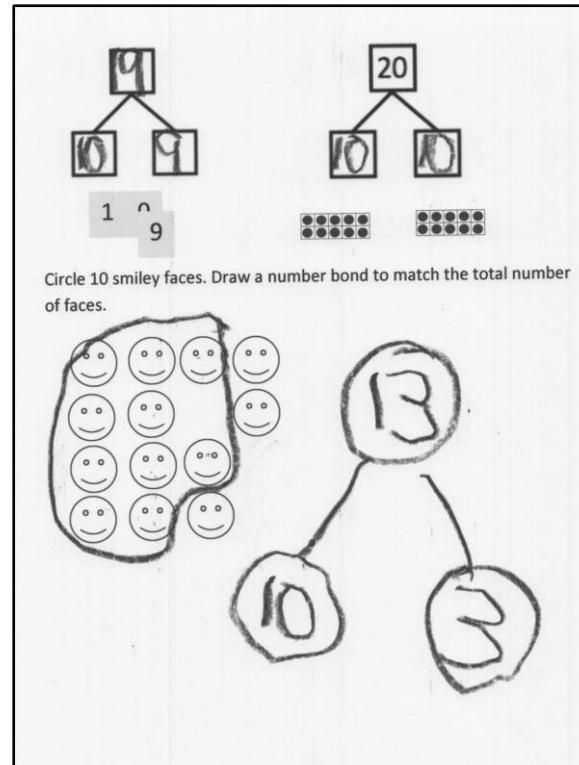
The Student Debrief is intended to invite reflection and active processing of the total lesson experience. Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings 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.

- Tell me about the pattern you see on your Problem Set.
- How are the number bond Hide Zero cards helping you to understand the numbers from eleven to twenty?
- How does counting the Say Ten way help you understand?
- How is this “1” in thirteen the same as this “1” in 19?

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

Show each number with your place value cards. Write each number as a number bond.

|           |           |           |
|-----------|-----------|-----------|
| <b>10</b> | <b>11</b> | <b>12</b> |
| 1 0       | 1 0 1     | 1 0 2     |
| <b>13</b> | <b>14</b> | <b>15</b> |
| 1 0 3     | 1 0 4     | 1 0 5     |
| <b>16</b> | <b>17</b> | <b>18</b> |
| 1 0 6     | 1 0 7     | 1 0 8     |



- When you made your number bonds, what stayed the same and what changed?
- When you see the number eleven, how are those two “1”s different?

### 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.

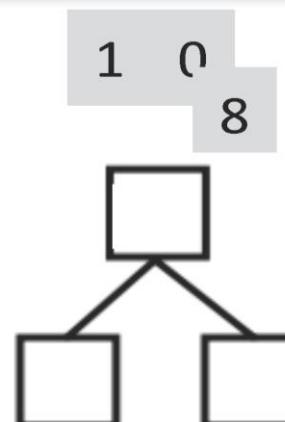
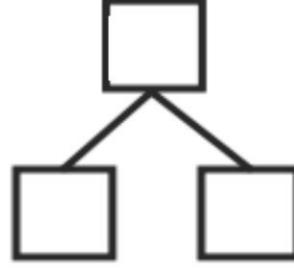
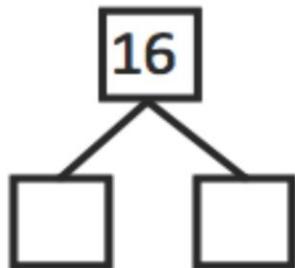
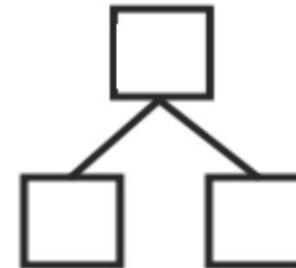
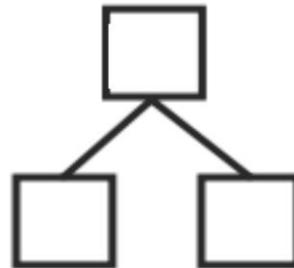
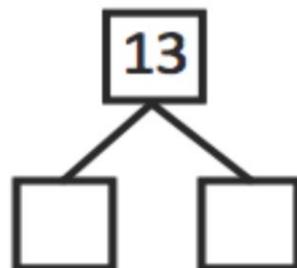
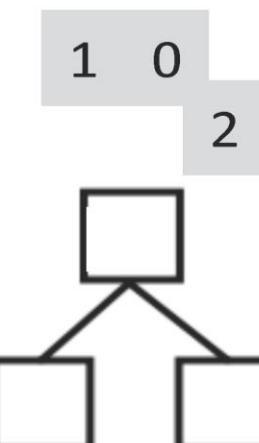
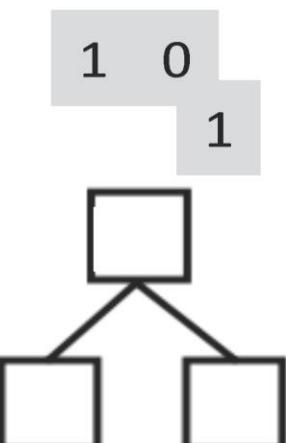
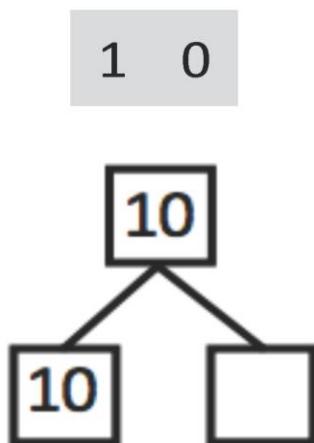


#### NOTES ON SCAFFOLDING ELLS:

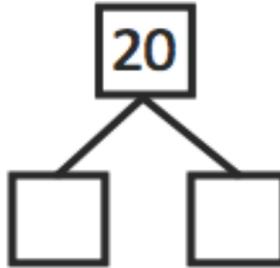
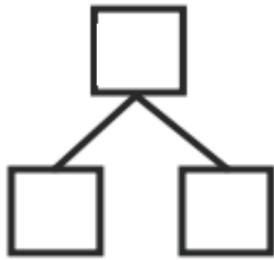
To support communication about such questions as, “Tell me about the pattern you see on your Problem Set,” allow English language learners access to materials with which they can demonstrate understanding of the pattern. Say, “You put one more” as you move the materials precisely as they did when they show their work to a partner or the class or to you. This shows you understood. Next, invite them to use “one more,” too.

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

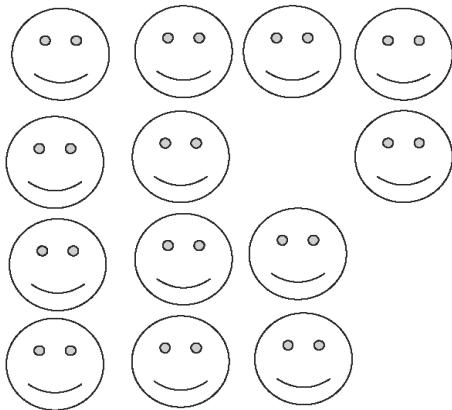
Look at the Hide Zero cards or the 10-frame cards. Use your cards to show the number. Write the number as a number bond.



1 0 9

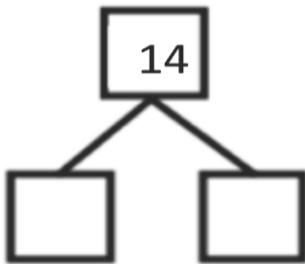
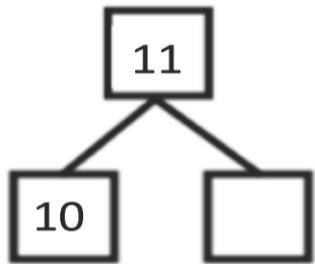
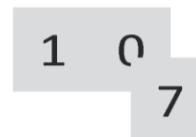
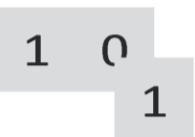


Circle 10 smiley faces. Draw a number bond to match the total number of faces.



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

Look at the Hide Zero cards or the 10-frame cards. Use your cards to show the number. Write the number as a number bond.

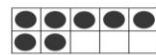


Name \_\_\_\_\_ Date \_\_\_\_\_

Look at the Hide Zero cards or the 10-frame cards. Use your cards to show the number. Write the number as a number bond.

1 0

8



1 0

6

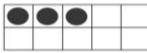
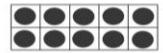
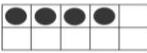
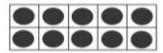
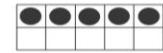
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10

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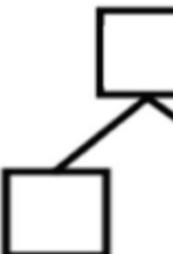
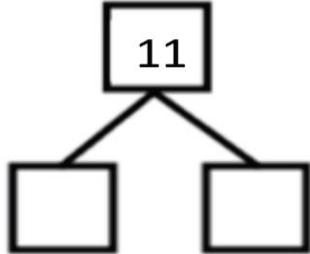
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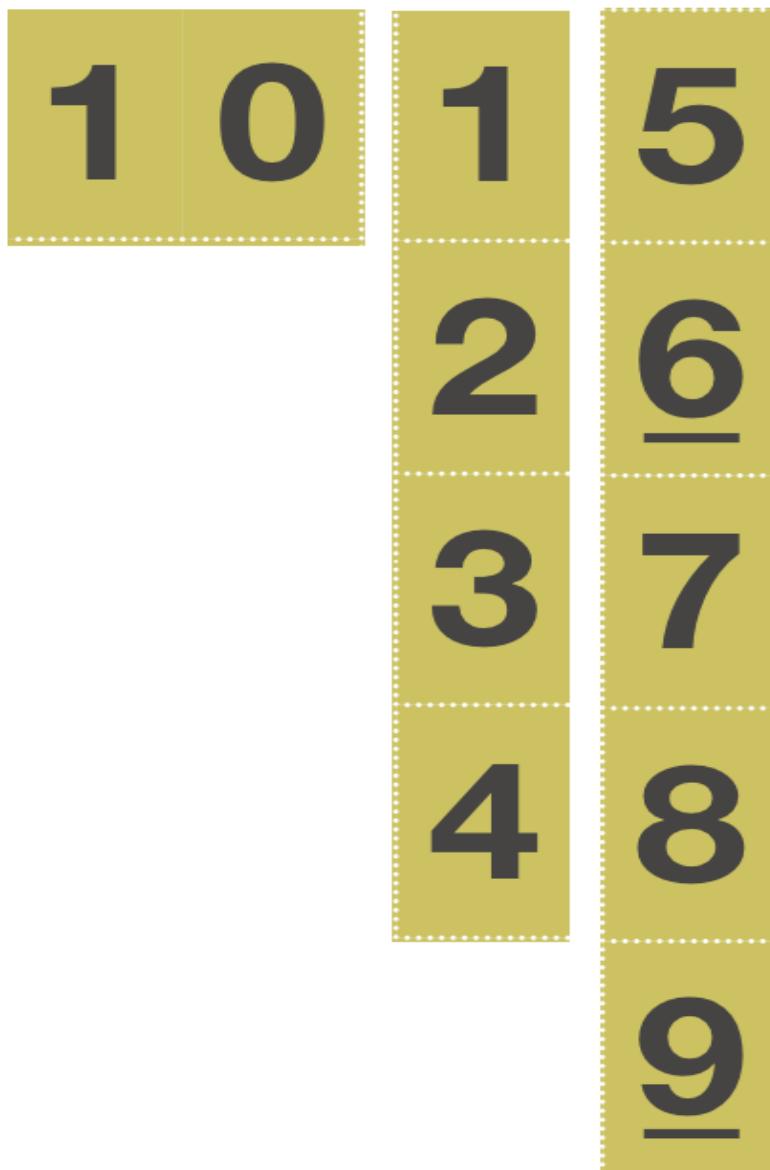


11



1 0

Cut along the dotted line and store in a bag.

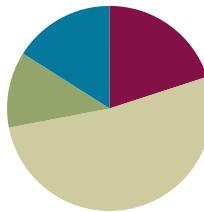


## Lesson 8

**Objective:** Model teen numbers with materials from abstract to concrete.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (10 minutes)        |
| Application Problem | (6 minutes)         |
| Concept Development | (26 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (10 minutes)

- Number Bonds of Eight **K.CC.2** (4 minutes)
- Separating Ten Ones Inside Teen Numbers **K.NBT.1** (3 minutes)
- Teen Number Bonds **K.NBT.1** (3 minutes)

### Number Bonds of Eight (4 minutes)

Materials: (T) Dot cards of eight

- T: (Show a dot card and indicate 7 and 1 as parts.) Say the biggest part. (Give students time to count).  
 S: 7.  
 T: Say the smallest part.  
 S: 1.  
 T: What is the total number of dots? (Give time to count).  
 S: 8.  
 T: Write your number bond.

Continue with 5 and 3, 4 and 4, 6 and 2, 8 and 0.

### Separating Ten Ones Inside Teen Numbers (3 minutes)

Materials: (S) Bag with about 20 small objects

- T: Put all the things in your bag on your work mat. Count out 10 ones and move them together into a bunch.  
 T: (Wait while students complete the task.) How many things are in your bunch?

S: 10.

T: Are there some outside your bunch?

S: Yes.

T: Push all your things back together. Spread them all out over your work mat.

Repeat this process 2 or 3 more times.

### Teen Number Bonds (3 minutes)

Materials: (T) Number Bond Cards

T: (Show a number bond with 10 and 5 as parts.) Say the number sentence.

S: 10 and 5 makes 15.

T: Flip it.

S: 5 and 10 makes 15.

Continue with 10 and 1, 10 and 9, 10 and 4, 10 and 8, 10 and 2, 10 and 6, 10 and 3, 10 and 7.



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

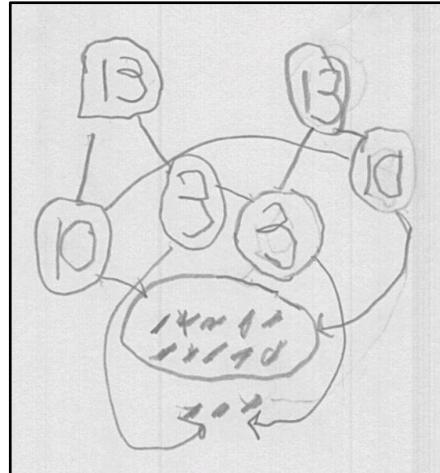
To support English language learners in explaining what they see, you may let them work with a student who speaks their own language. This is the key in illustrating the commutative property in a very student-friendly setting. It is always easier to explain using a familiar language.

### Application Problem (6 minutes)

**MP.3**

Peter drew a number bond of 13 as 10 and 3. Bill drew one, too, but he switched around the 10 and 3. Show Bill and Peter's number bonds. Draw a picture of thirteen things as 10 ones and 3 ones. Explain your thinking to your partner about what you notice about the two number bonds.

Note: The students have noticed that the parts of number bond can be switched around in Module 4. Make it exciting for them to find out that the same rules, or math truths, apply to bigger numbers, too!

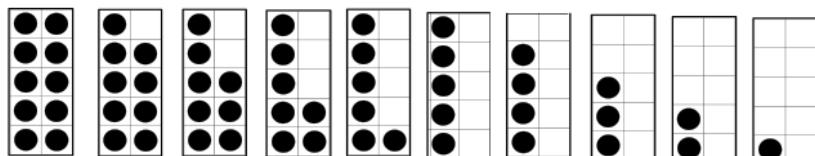


### Concept Development (26 minutes)

Materials: (S) Per pair of students: a bag of Hide Zero cards (1 ten and numerals 1–9), 2 sets of 10 linking cubes with 10 in one color and 10 in another color, a bag of 5-group cards, and a personal white board for each student

**Part 1: Modeling Teen Numbers 11–20 with Linking Cubes and Hide Zero cards.**

T: Partner A, open the bag with the Hide Zero cards and put them on your work mat. With your partner, put them in order from 10 to 1. (Wait.)



T: Partner B, open the bag with the 5-group cards and put them on your work mat.



Work with your partner to put the cards above the matching Hide Zero cards. (Wait.)

T: (Write 11 on the board.) What number is this?

S: Eleven!

T: How would you say it the Say Ten way?

S: Ten one.

T: Please write the number 11 on your personal boards. When I ask you to show me your board, show me.

T: Now I want you to work with your partner to show the number. Partner A, show the number with the Hide Zero cards, and remember to hide the zero!

T: Partner B, show the number with the linking cubes. Use one color to show 10 ones, and the other color to show the other ones.

T: Check each other's work. Explain why you're both showing 11.

Repeat the process with the numbers 12–19.

**Part 2: Modeling Teen Numbers 11–20 with 5-Group Cards and Hide Zero cards.**

T: (Write 15 on the board.) What is the number?

S: Fifteen!

T: The Say Ten way?

S: Ten five!

T: Write 15 on your personal board, then show me.

T: This time, Partner A is going to show the number with 5-group cards and Partner B is going to show the number with cubes. After you check each other's work, you'll switch.

Repeat the process above with numbers 11–19.

 **NOTES ON  
MULTIPLE MEANS OF  
REPRESENTATION:**

Support your English language learners who have difficulty distinguishing between words such as, “thirteen” and “thirty” and “fourteen” and “forty” by instructing them to practice saying “thirteen” and “thirty” as you point to both the numeral and the word written under each numeral.

## Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Have students use the bag of 20 small objects from today's fluency activity as they complete the Problem Set.

## Student Debrief (8 minutes)

**Lesson Objective:** Model teen numbers with materials from abstract to concrete.

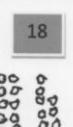
The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

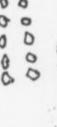
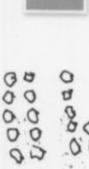
Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a

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.

Have a set of 5-group cards, Hide Zero cards, and 20 linking cubes in two different colors ready to display.

- What is the same/different about the 5-group cards and the Hide Zero cards?
- How can you prove 20 is the same as 2 ten?
- When you write the number 18 on your personal board, how is it the same and different from the number 18 when you show it with Hide Zero cards or 5-group cards?
- Which is your favorite way to show a number—with linking cubes, the Hide Zero cards, the 5-group cards, or just writing the number? Why?
- Count up to 20 in standard form and count back to 0 the Say Ten way.
- Who can prove that the 1 in 14 is 10 ones, not 1 one?

|   |   |
|---|---|
| Name <u>Ben</u> Date _____<br>Use your materials to show each number as 10 ones and some more ones. Show each number with your Hide Ten cards. Whisper count as you work. |   |
| 11<br>  | 18<br> |
| 15<br>  | 14<br> |

|   |   |
|---|---|
| 12<br> | 17<br> |
| 20<br> | 13<br> |

**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.

Name \_\_\_\_\_

Date \_\_\_\_\_

Use your materials to show each number as 10 ones and some more ones.

Use your 5-Groups way of drawing. Show each number with your Hide Zero cards. Whisper count as you work.

11

18

15

14

12

17

20

13

Name \_\_\_\_\_

Date \_\_\_\_\_

Use your materials to show the number as 10 ones and some more ones.

1 6

Use your cubes to show the number. Then color in the cubes to match the number.

1 2

|  |  |  |  |  |  |  |  |  |  |
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Name \_\_\_\_\_

Date \_\_\_\_\_

Use your materials to show each number as 10 ones and some more ones.

1 5

1 3

Ten seven

Ten one

1 2

1 6

2 ten

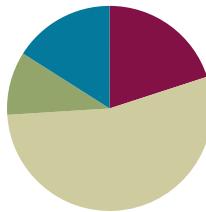
Ten four

## Lesson 9

**Objective:** Draw teen numbers from abstract to pictorial.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (10 minutes)        |
| Application Problem | (5 minutes)         |
| Concept Development | (27 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (10 minutes)

- Dot Cards of Nine **K.CC.5, K.CC.2** (4 minutes)
- How Many is One More? **K.CC.2** (2 minutes)
- Grouping Teen Numbers into 10 Ones **K.NBT.1** (4 minutes)

### Dot Cards of Nine (4 minutes)

Materials: (T) Varied dot cards of 9 (S) Varied dot cards of 9 (examples to the right)

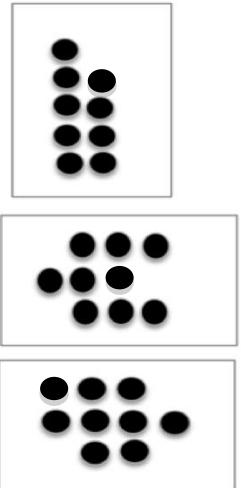
T: (Show a card with 9 dots.) How many dots do you count? Wait for the signal to tell me.

S: 9.

T: How can you see them in two parts?

S: (Students come up to the card.) I saw 5 here and 4 here. I saw 3 here and 6 here. I saw 2 here and 7 here.

Repeat with other cards. Pass out the cards for students to work independently.



### How Many is One More? (2 minutes)

Materials: (T) Ten-frame cards

T: (Show 3.) How many dots?

S: 3.

T: What's one more than 3?

S: 4.

Repeat with all the numbers through 10.

### Grouping Teen Numbers into 10 Ones (4 minutes)

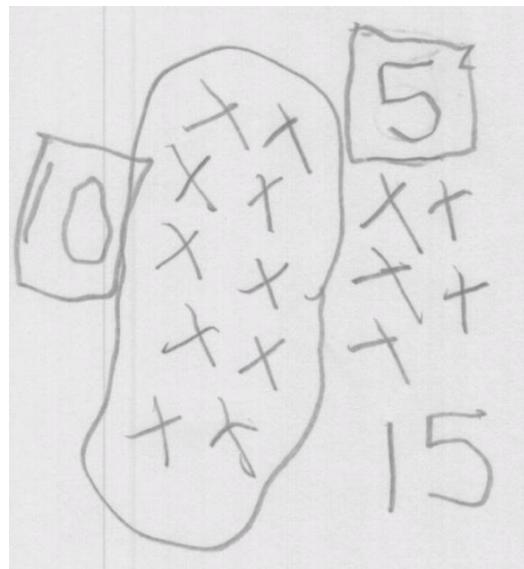
Materials: (S) Bag with about 20 small objects and work mat for each student

- T: Put all the things in your bag on your work mat. Count out 10 ones and move them together into a bunch.
- T: (Wait while they work.) How many ones are in your bunch?
- S: 10 ones.
- T: How many are not in your bunch?
- S: 3 ones.
- T: Say the number sentence.
- S: 10 ones and 3 ones equals 13 ones.
- T: Push all your things back together. Spread them all out over your work mat.

Repeat process 2 or 3 more times. Ask students if the same 10 things are in the bunch each time.

### Application Problem (5 minutes)

A Pre-Kindergarten friend named Jenny drew 15 things with 1 chip and 5 more chips. Draw 15 things as 10 ones and 5 ones and explain to your partner why you think Jenny made her mistake.



#### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Students below grade level may need to model Jenny's mistake and count the quantity so that they can compare it to the fifteen chips. Provide students with counters so that they can show the correct solution to the problem and explain her mistake.



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Challenge your above grade level students by extending the Application Problem by asking, "If Jenny made the same mistake representing 18, how might she show it?" and "How many more chips does Jenny need to correct her mistake?"

## Concept Development (27 minutes)

Materials: (S) Personal white boards with a double ten-frame card inside

- T: I'm going to write a number on the board. I want you to show that number by putting circles or dots inside the ten-frames.
- T: (Write 10 on the board.) Say the number.
- S: Ten!
- T: Draw circles or dots to show ten. When I say show me, hold up your board.
- T: Show me. How many ones did you draw?
- S: Ten ones.
- T: Very good. Erase your boards. (Write 14.) Say the number.
- S: Fourteen!
- T: Whisper the number the Say Ten way as you fill in your ten-frames to show it.
- T: Talk with a partner to explain your drawing and how you grouped the dots.
- T: (Write 18.) Say the number the Say Ten way.
- S: Ten eight!
- T: Whisper the number the regular way as you fill in your ten-frames.
- T: Talk with your partner. Explain why your picture shows ten eight.

Continue this way with 15 and 19.

- T: Now let's try something different. Turn your boards over to the blank side. I'm going to show a number. I want you to make a drawing that shows that many circles. Then I want you to circle 10 ones so we can see the parts that make up the number.
- T: (Show 16. Wait.)
- T: Show me.
- T: How many ones did you draw?
- S: Sixteen ones.
- T: How did you group the sixteen ones?
- S: Ten ones and 6 ones.
- T: Yes! Let's do another.

Continue this way through the other teen numbers.



### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Support your English language learners in comparing the ten-frame drawing and circle drawings by referring to the images. For the teen numbers, be sure to post the numerals along with the written word. Students have a difficult time hearing that "thirteen" is a different number from "thirty" because they sound alike. Having these clearly differentiated on the word wall will help them keep them apart.

## Problem Set

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. Direct the students to count as they represent the numbers. Have them whisper count as they work and fill one complete ten-frame before moving on to the next. Have them show their numbers with Hide Zero cards.

## Student Debrief (8 minutes)

**Lesson Objective:** Draw teen numbers from abstract to pictorial.

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.

- How are your ten-frame drawings and your circle drawings the same and different?
- Look at your ten-frame drawings with your partner. Did you draw the number 17 the same way? If not, explain why both drawings show 17. Do the same for the number 16.
- Compare your ten-frame drawings with your circle drawings. Is one drawing easier to read and understand than the other? Explain your thinking.
- Do a finger flash in mixed order from 10 to 20 and have students say the numbers the Say Ten way.

## 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.

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

Show the number by filling in the ten frames with circles.

|    |  |    |
|----|--|----|
| 12 |  | 17 |
|    |  |    |

|    |  |    |
|----|--|----|
| 16 |  | 13 |
|    |  |    |

COMMON CORE | Lesson 9: Draw teen numbers from abstract to pictorial. ©2013

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Draw and circle 10 ones and some more ones to show each number.

|    |  |    |  |
|----|--|----|--|
| 20 |  | 11 |  |
|    |  |    |  |

Make up and draw your own teen numbers.

|    |  |    |  |
|----|--|----|--|
| 14 |  | 15 |  |
|    |  |    |  |

COMMON CORE | Lesson 9: Draw teen numbers from abstract to pictorial. ©2013

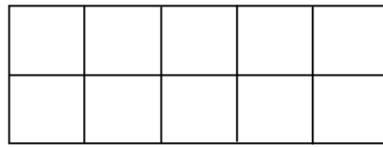
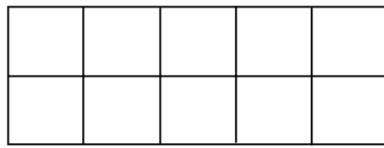
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Name \_\_\_\_\_

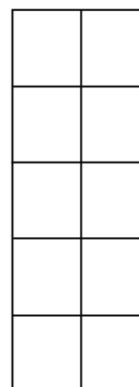
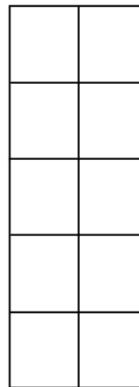
Date \_\_\_\_\_

Whisper count as you draw the number. Fill one ten-frame first. Show your numbers with your Hide Zero cards.

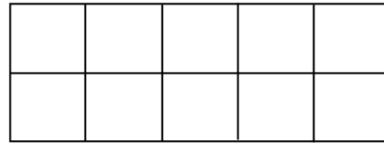
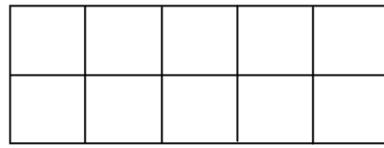
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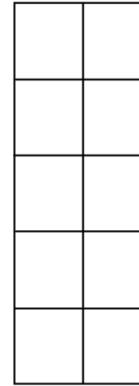
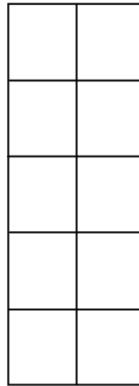
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16



13

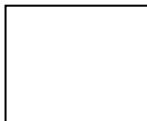


Draw and circle 10 ones and some more ones to show each number.

20

11

Make up and draw your own teen numbers.

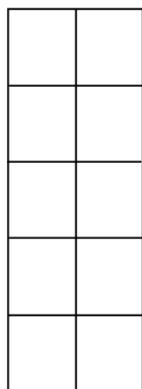


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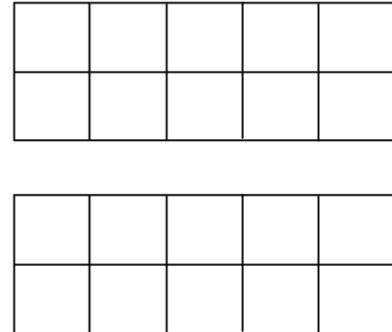
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Show the number by filling in the ten-frames with circles.

15



19



Draw circles to show the number. Circle 10 ones.

18

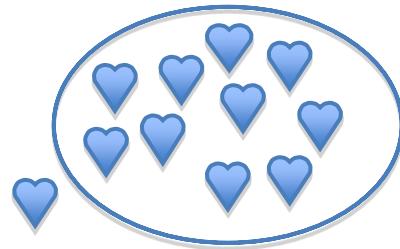
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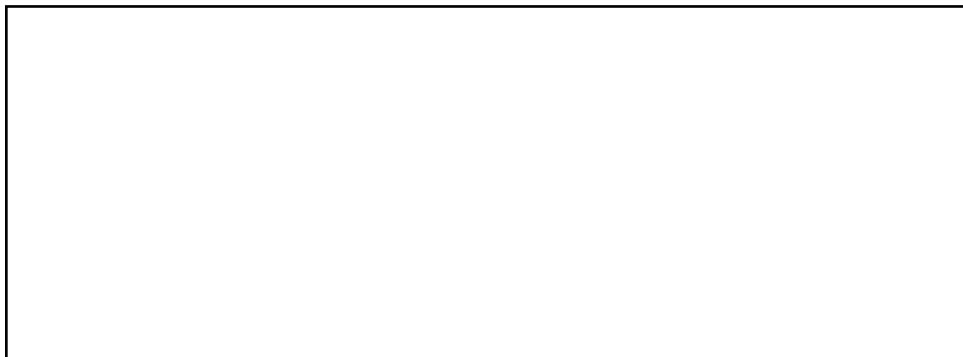
Date \_\_\_\_\_

For each number, make a drawing that shows that many objects.  
Circle 10 ones.

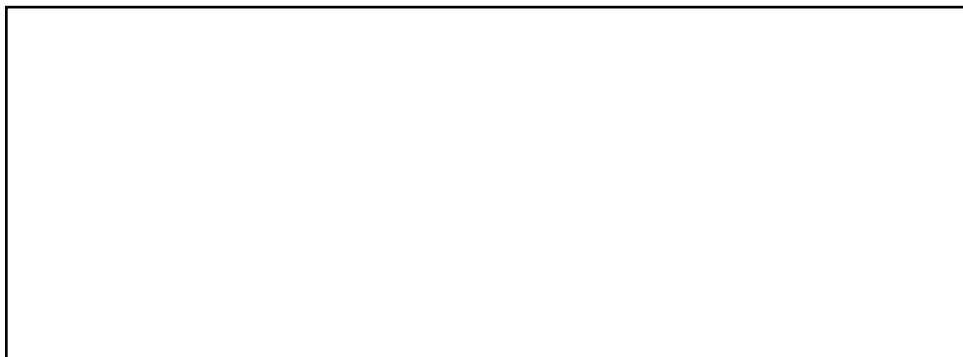
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16



20



19

14

12



## Topic C

# Decompose Numbers 11–20, and Count to Answer “How Many?” Questions in Varied Configurations

**K.CC.4b, K.CC.4c, K.CC.5, K.NBT.1, K.CC.3, K.CC.4a**

|                               |   |  |
|-------------------------------|---|--|
| <b>Focus Standard:</b>        | K.CC.4b<br><br>K.CC.4c<br><br>K.CC.5<br><br>K.NBT.1 | Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.<br><br>Understand that each successive number name refers to a quantity that is one larger.<br><br>Count to answer “how many?” questions, about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many ten things in a scattered configuration; given a number from 1 – 20, count out that many objects.<br><br>Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. |
| <b>Instructional Days:</b>    | 5   |  |
| <b>Coherence -Links from:</b> | GPK–M5  | Write Numerals to 5, Addition and Subtraction Stories, Count to 20   |
| <b>-Links to:</b>             | G1–M2   | Place Value, Comparison, Addition and Subtraction of Numbers to 20   |

Topic C opens in Lesson 10 with students building a Rekenrek to 20, which they will use to count and model numbers for the balance of the year. They will deepen their understanding of the composition and decomposition of teen numbers as 10 ones and some more ones (**K.NBT.1**) by showing, counting, and writing (**K.CC.3**) the numbers 11 to 20 using a variety of configurations: vertical towers, linear, array, and circular configurations. In each configuration, students count to answer “how many?” questions (**K.CC.5**) and realize that whatever the configuration, a teen number can be decomposed into 10 ones and some ones.



Lessons 11 and 12 represent each teen number as a part of a set of number stairs to 20. Each vertical tower is set within the ordered continuum. This configuration allows them to see each teen number in relationship to the others, as one larger than the number before it (**K.CC.4c**), in relationship to 10, and in relationship to numbers 1–9 since the lesson's worksheet has a color change after 10 ones. Next, in Lesson 13, students move teen quantities back and forth between linear and array configurations, practice counting strategies, and recognize that when they answer “how many?” the total has not changed. Finally, the topic culminates with the most challenging configuration, the circle. Students circle 10 and see that yes, the circle is composed of 10 ones and some ones, too. They become proficient at counting in all configurations to answer “how many?” questions (**K.CC.5**).

### A Teaching Sequence Towards Mastery of Decomposing Number 11–20, and Counting to Answer “How Many?” Questions in Varied Configurations

**Objective 1:** Build a Rekenrek to 20.  
(Lesson 10)

**Objective 2:** Show, count, and write numbers 11 to 20 in tower configurations increasing by 1—a pattern of 1 larger.  
(Lesson 11)

**Objective 3:** Represent numbers 20 to 11 in tower configurations decreasing by 1—a pattern of 1 smaller.  
(Lesson 12)

**Objective 4:** Show, count, and write to answer *how many* questions in linear and array configurations.  
(Lesson 13)

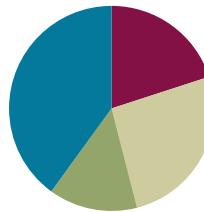
**Objective 5:** Show, count, and write to answer *how many* questions with up to 20 objects in circular configurations.  
(Lesson 14)

## Lesson 10

**Objective:** Build a Rekenrek to 20.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (10 minutes)        |
| Application Problem | (7 minutes)         |
| Concept Development | (13 minutes)        |
| Student Debrief     | (20 minutes)        |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (10 minutes)

- Writing Teen Numbers **K.CC.3** (4 minutes)
- Showing Numbers with Hands **K.CC.4, K.NBT.1** (3 minutes)
- Counting **K.CC.2** (3 minutes)

### Writing Teen Numbers (4 minutes)

Materials: (T) Linking cubes (S) Personal white boards

- T: (Show 3 cubes.)  
 S: (Students write the numeral 3.)  
 T: (Show 10 cubes.)  
 S: (Students write the numeral 10.)  
 T: (Show 13 cubes.)  
 S: (Students write 13.)

Repeat for possible sequence: 10, 13, 19, 5, 17, 8, 18, 15, 12, 14, 16.

### Showing Numbers with Hands (3 minutes)

Materials: (T) Rekenrek

- T: Show 12 on the Rekenrek.  
 T: Show the two parts of the number on your fingers.  
 Say the parts at the same time.  
 S: 10 (flashing ten fingers) and 2 (showing two fingers).



#### NOTES ON SHOWING NUMBERS THE HANDS WAY:

Encourage students to show ones the “Math Way” that they’ve been practicing throughout the year, left pinky to right pinky.

Continue with the following possible sequence: 13, 14, 19, 16, 18, 15, 11, 17, 20.

### Counting (3 minutes)

Materials: (T) Rekenrek

Count by ones from 11–20, changing directions both the Say Ten way and the regular way.

### Application Problem (7 minutes)

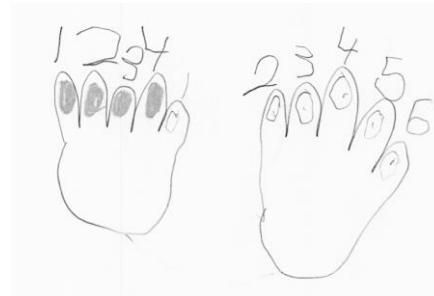
Ms. Garcia is painting her fingernails. She has painted all the nails on her left hand except her thumb. How many more nails does she need to paint? How many will she have left to paint after she paints her left thumb? Draw a picture to help you.

Note: This problem is an application of **K.OA.4** wherein students learn the number that makes 10 from any number less than 10. As a word problem, this is a “change unknown” which is a first grade problem type. Therefore, the number sentence is not asked for since missing addends will be introduced in the fall of Grade 1.

### Concept Development (13 minutes)

Materials: (S) Problem Set, 10 red beads, 10 white beads, a red crayon, a black crayon

- T: (Distribute the Problem Set. Have the students put the red beads in a line under the hands.)
- T: Imagine these red beads are Ms. Garcia’s painted fingernails. Show me how many she painted at first. Put them on her fingernails. (Students show.)
- T: How many fingernails did she paint and how many does she need to paint? Use these words to help. Listen.
- T: “She painted \_\_\_\_ fingernails. She needs to paint \_\_\_\_ fingernails.”
- S: She painted 4. She needs to paint 6.
- T: Paint one more nail on her left hand. (Pause.) Tell me what she’s painted and what she needs to paint.
- S: She painted 5. She needs to paint 5.



#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Push the thinking of your students who are above grade level by asking what would happen if Ms. Garcia also paints her toenails and how many nails has she painted when she is completely done? You can extend their thinking further by asking, “If Ms. Garcia draws two green polka dots on each finger, how many polka dots does she paint all together?”

#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Scaffold the lesson for your English language learners by pointing to the painted hand as you ask “How many did she paint?” and point to the hand that is not painted as you ask “How many does she need to paint?”

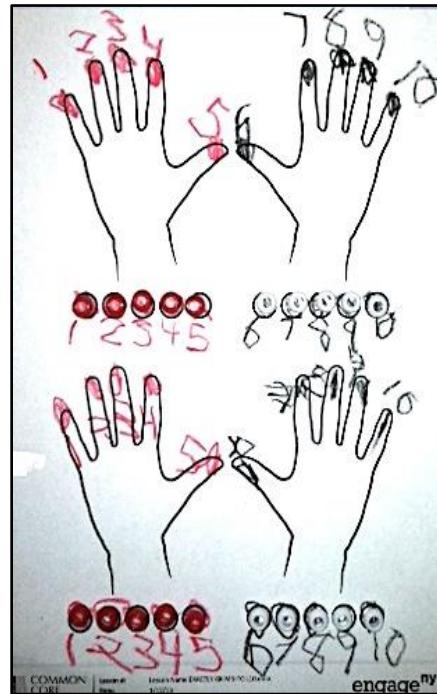
**MP.7**

Continue the pattern of painting one more fingernail and making the statements that describe how many have been and need to be painted. Have the students work independently as soon as they are able. Once they have finished the first pair of hands, have them use the second pair of hands for Ms. Garcia's unpainted nails (the white beads.) Have them put all the white beads on her fingers, counting and making statements as they go. Engage them in counting all the beads, analyzing how many are red and how many are white, how many are on the left hands, how many on the right hands.

### Problem Set (5 minutes)

Students should do their personal best to complete the Problem Set within the allotted 5 minutes.

Students color the left-hand fingernails red and color the right-hand fingernails black, counting as they go. Color the corresponding "beads" below to match the hands, counting as they go. They can write their numbers 1 to 10, too.



### Student Debrief (20 minutes)

**Materials:** (S) 10 red and 10 white pony beads already used in lesson, two 12-inch lengths of elastic, 1 piece 2.75 inch by 5.5 inch chip board with an indentation (note that each 8 ½ inch by 11-inch chipboard makes 4 Rekenreks.)

- T: Let's make a Rekenrek. Put your red beads on top of your red dots and your white beads on top of your black dots, counting as you go.
- T: What do you know about the number of your red and white beads?
- S: They both have ten. → They are the same number.  
→ They are an equal number.
- T: How do you say the total number of beads the Say Ten way?
- S: 2 tens.
- T: How many beads is that the regular way?
- S: Twenty.

After showing students how to thread the elastic through from left to right, red beads first, give each student a twelve-inch elastic. Once they have finished one row, have them do the other row. Show them how to pinch the elastics at either end in order to pick up the row and

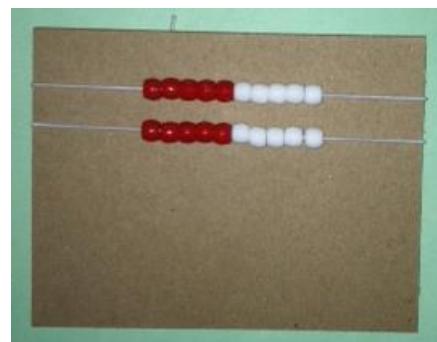
 **NOTES ON  
SCAFFOLDING  
STUDENTS BELOW  
GRADE LEVEL:**

For students below grade level, offer extra support.

**Show:** Complete the first three fingers on the Problem Set.

**Watch:** Check in with students as they work on the next three fingers.

**See:** Students complete the rest of the fingers and the beads independently when ready.



place it on their chip board, one row under the other. You can circulate and tie the elastics or have helpers tie the elastics after class for use in following lessons.

The discussion should establish a correlation between students' fingernails and the beads of the Rekenrek.

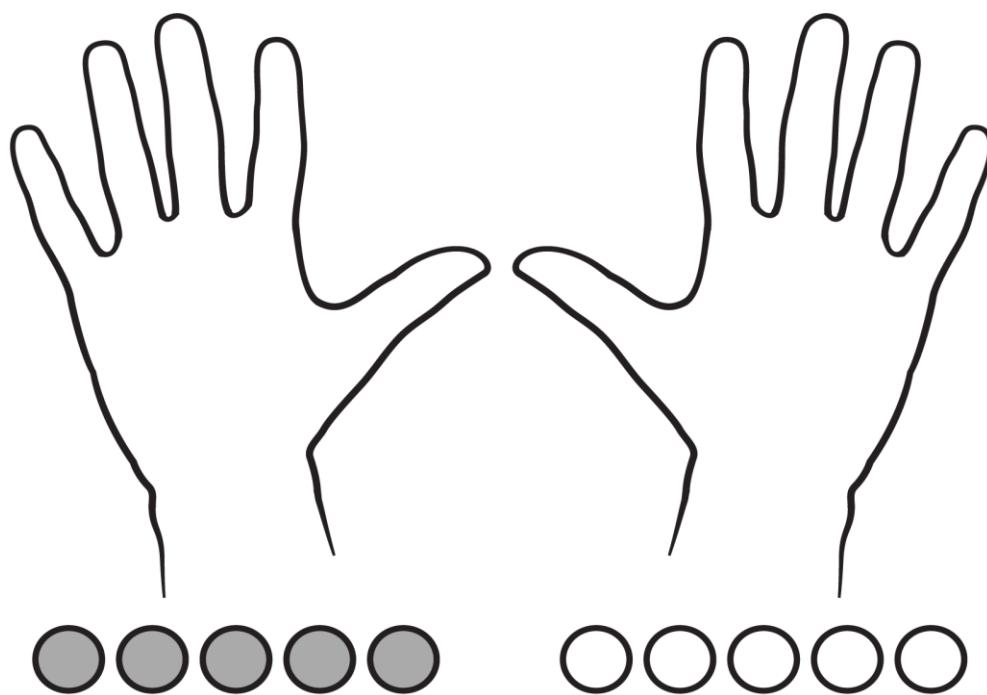
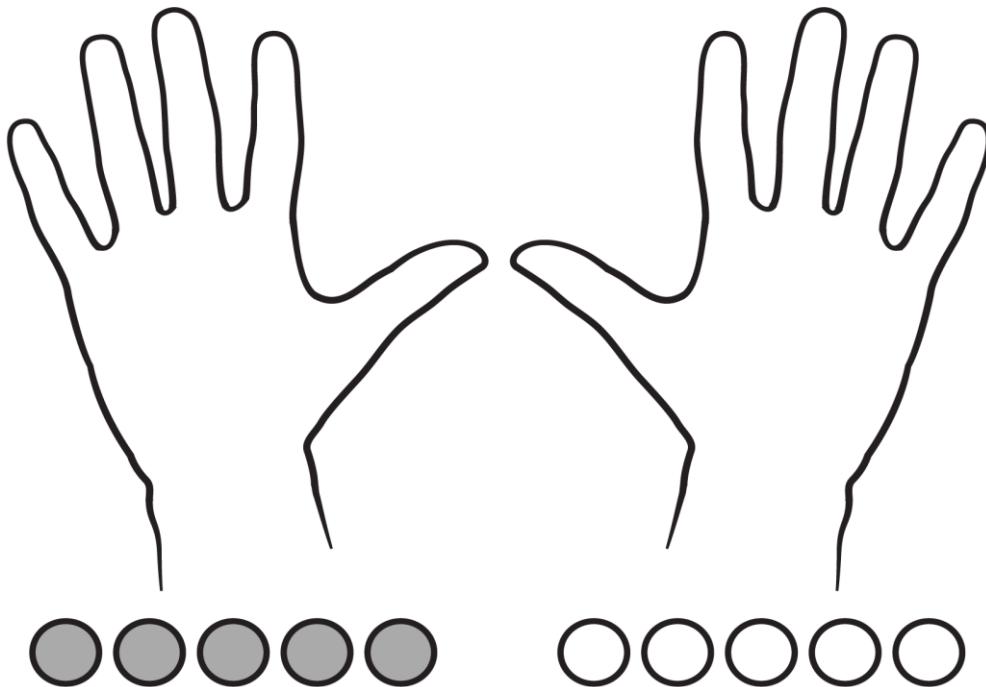
- Talk to your partner about what is the same and what is different about the number of your fingernails and the number of beads.
- How many people do we need to have to have the same number of fingernails as is on your Rekenrek?
- If the beads were purple and green, how many nails and beads would be purple and how many would be green?
- What if you hide two hands? How many beads would you see?

### 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.

Name \_\_\_\_\_

Date \_\_\_\_\_



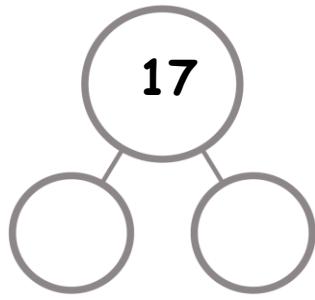
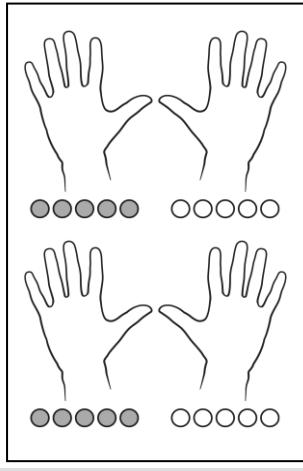
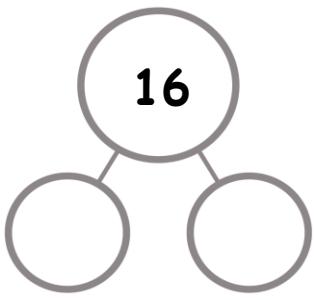
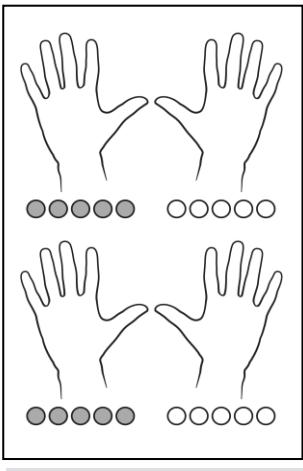
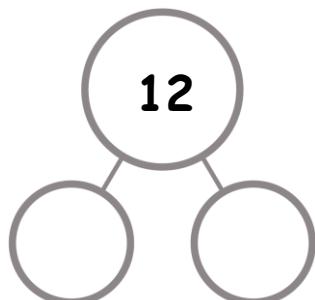
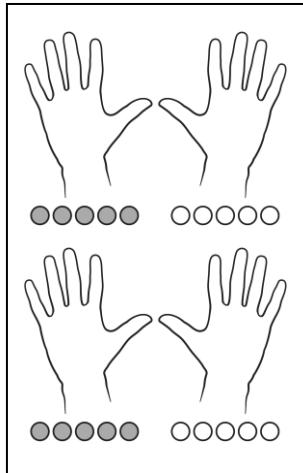
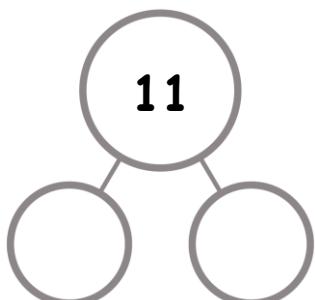
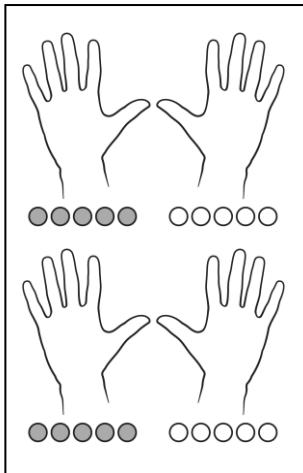
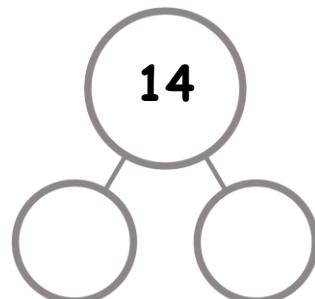
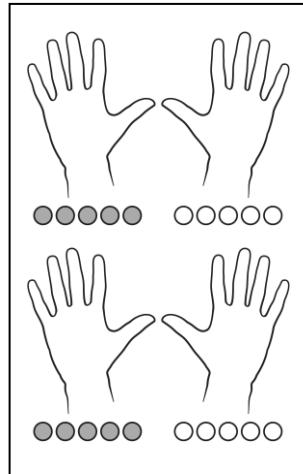
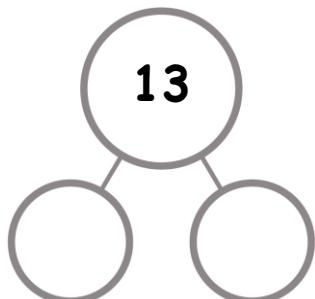
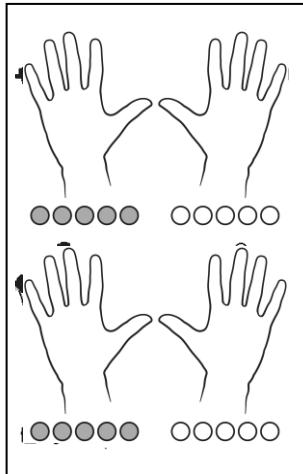
Name \_\_\_\_\_ Date \_\_\_\_\_

1. Use your red crayon and yellow crayon to draw the beads from your Rekenrek in two lines.
  2. How many beads did you draw?
  3. Draw your fingernails. How many fingernails do you have on your two hands?

Name \_\_\_\_\_

Date \_\_\_\_\_

Color the number of fingernails and beads to match the number bond. Show by coloring 10 ones above and extra ones below. Fill in the number bonds.

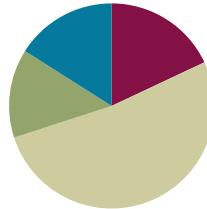


## Lesson 11

**Objective:** Show, count, and write numbers 11 to 20 in tower configurations increasing by 1—a pattern of *1 larger*.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (9 minutes)         |
| Application Problem | (7 minutes)         |
| Concept Development | (26 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (9 minutes)

- Counting on a Rekenrek **K.CC.3** (4 minutes)
- One More **K.CC.2** (3 minutes)
- Saying Teen Numbers the Say Ten way **K.NBT.1** (2 minutes)

### Counting on a Rekenrek (4 minutes)

Materials: (S) Rekenrek

T: Take out the Rekenrek that you made yesterday. I'm going to call out a number and I want you to show it on your abacus. (Wait while students prepare their abacus.)

Possible sequence: 1, 2, 5, 6, 10, 11, 12, 13, 14, 15, 16, 15, 16, 17, 18, 19, 20, 19, 18, 17, 16, 15, 10, 5, 4, 3, 2, 1.

### One More (3 minutes)

Materials: (T) Rekenrek

T: I want you to say one more than the number that you see on the abacus. (Show 3.)

S: 4.

T: (Show 13.)

S: 14.

Continue with the following possible sequence: 5, 15, 1, 11, 4, 14, 7, 17, 8, 12, 9, 6, 19.

## Saying Teen Numbers the Say Ten way (2 minutes)

T: I'm going to say a number. You say it the Say Ten way. Eleven.

S: Ten one.

T: Twelve.

S: Ten two.

Repeat process for possible sequence: 13, 17, 19, 14, 16, 18, 15, 20.

## Application Problem (7 minutes)

Mary has 10 toy trucks. She told her mom she likes to spread them out on the floor. She said she doesn't like to put them away neatly in the little toy box because then there are fewer toys. Can you draw a picture to prove to Mary that the number of toy trucks is the same when they are all spread out as when they are in the little toy box?



## Concept Development (26 minutes)

Materials: (S) Two sets of 10 linking cubes for each student (10 in one color and 10 in another color), sentence frame ("\_\_\_\_\_. 1 more is \_\_\_\_\_.")

Note: Please notice that we are not saying, "20 is 1 more than 19." This is very complex linguistically for many kindergarten students who can say "19 is more than 18" without quantifying the difference. They simply are seeing and analyzing that each successive number is one larger. (**K.CC.4c**).

T: Show me a tower of 10 cubes using one color.

T: (Students show a tower of 10.) How many cubes are you holding?

S: Ten.

T: How many ones is that?

S: 10 ones.

T: How many cubes do you put to make 11?

S: 1 more!

T: Show me 11. (Point to the first sentence frame.) While you do that, say, "Ten. 1 more is 11."

S: Ten. 1 more is 11.

T: And how do we say 11 the Say Ten way?

S: Ten one.



### NOTES ON MULTIPLE MEANS OF REPRESENTATION :

Focus on academic vocabulary to help your English language learners with the application problem. Provide students with a template for their work. Adapt the template so that one side has a graphic or a picture to represent the floor and one side has a graphic to represent the toy box.

T: Good! Put one more cube to your tower.

S: (Show 12.)

T: How many cubes do you have now?

S: Twelve.

T: Repeat with me, "Eleven. 1 more is 12."

S: Eleven. 1 more is 12.

Use the sentence frames to help students express the relationship of each number to the preceding number. Continue adding one more cube for each number up to 20. Release as many students as possible to continue the pattern with a partner following "13. 1 more is 14." Continue releasing students as they demonstrate skill and understanding.

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

As students color the squares and write the numbers to complete the pattern, have them continue to say the relationship of each number to its preceding number, e.g., Fourteen. 1 more is 15. Fifteen. 1 more is 16,etc.

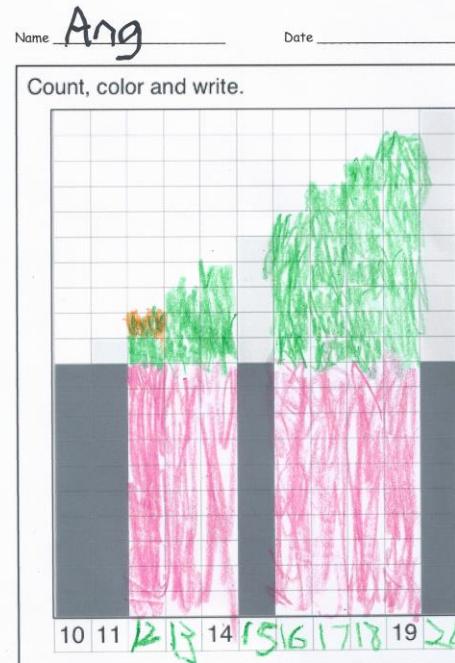
### Student Debrief (8 minutes)

**Lesson Objective:** Show, count, and writer numbers 11 to 20 in tower configurations increasing by 1 – a pattern of 1 *larger*.

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. They can count on or count all, as needed. 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.

- What do you notice when you look at your paper?
- How is your drawing like the towers you made?
- How many cubes did you put on your tower each time?
- Did the number get bigger or smaller when you put one more?



#### NOTES ON SCAFFOLDING DIVERSE LEARNERS:

For students who are below grade level, have them regularly work with you when they come to the carpet rather than with a partner. This will provide them with companionship with peers as well as much needed extra time with the teacher.

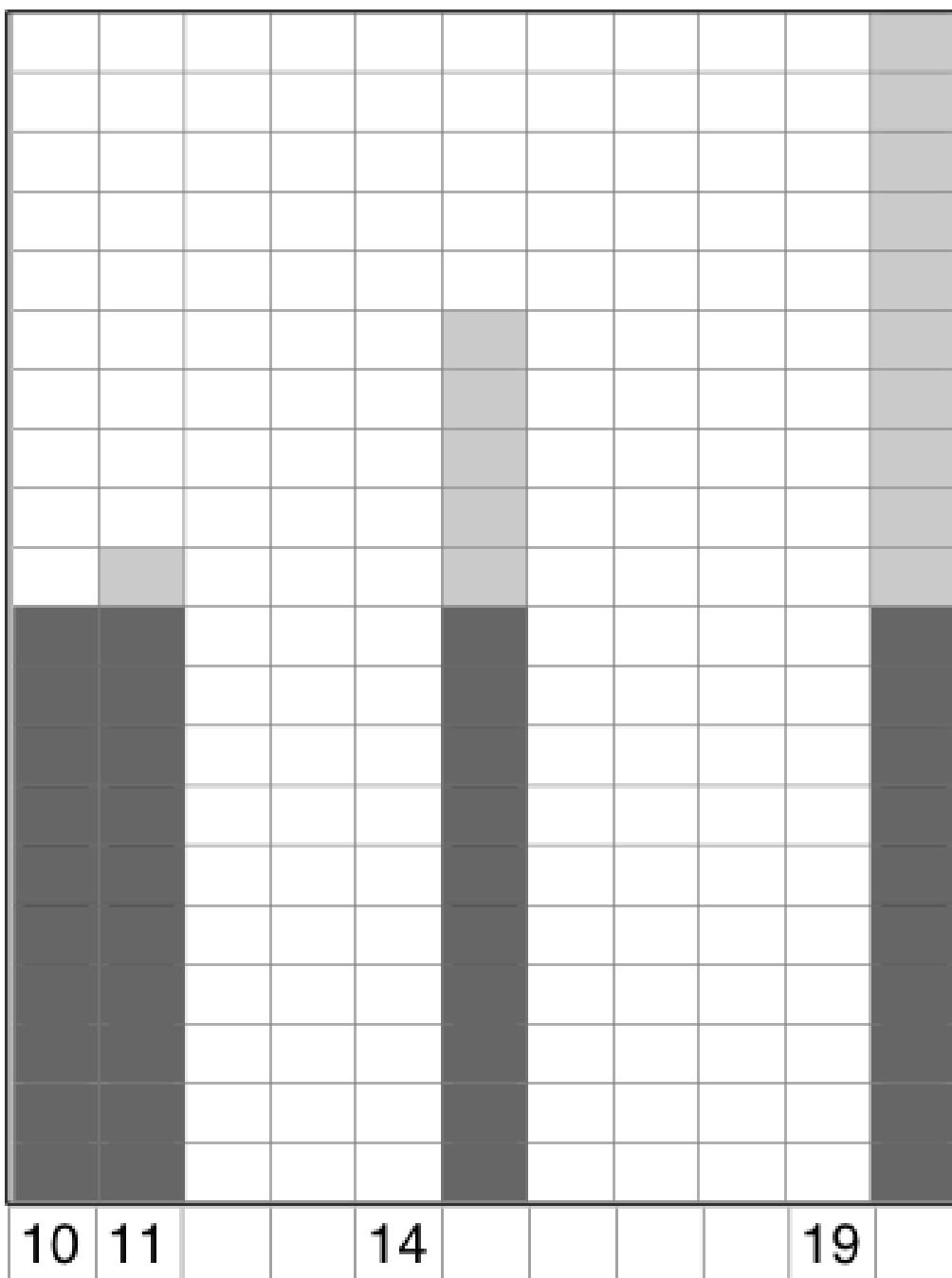
- How is the number tower you made the same as the Rekenrek you made? How is it different?
- Fold your paper in half and look just at the green stairs. How are they the same and different than the stairs for the bigger numbers?

**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.

Name \_\_\_\_\_

Date \_\_\_\_\_

**Count, color and write.**

Name \_\_\_\_\_

Date \_\_\_\_\_

Start at the bottom. Draw lines to put the numbers in order on the tower. Then write the numbers in the tower. Say each number the regular way and the Say Ten way as you work.

12 ●

19 ●

16 ●

14 ●

17 ●

20

18

15

13

11

10

Name \_\_\_\_\_

Date \_\_\_\_\_

Write the missing numbers. Then count and draw X's and O's to complete the pattern.

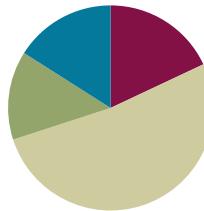
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|----|---|----|---|----|---|---|----|----|----|---|----|
|    |   |    |   |    |   |   |    |    |    | X |    |
| O  | O | X  | X | X  | X | X | X  | X  | X  | X | X  |
| O  | O | O  | X | O  | O | O | O  | O  | O  | X | X  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| O  | O | O  | O | O  | O | O | O  | O  | O  | O | O  |
| 10 |   | 12 |   | 14 |   |   | 16 | 17 | 18 |   | 20 |

## Lesson 12

**Objective:** Represent numbers 20 to 11 in tower configurations decreasing by 1—a pattern of *1 smaller*.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (9 minutes)         |
| Application Problem | (7 minutes)         |
| Concept Development | (26 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (9 minutes)

- Write Teen Numbers **K.CC.3** (3 minutes)
- Show Teen Numbers **K.NBT.1** (3 minutes)
- Count the Say Ten way **K.NBT.1** (3 minutes)

### Write Teen Numbers (3 minutes)

Materials: (S) One stick of 10 linking cubes that are the same color, 10 loose cubes of a different color, personal white boards

- T: Place your stick of ten cubes in front of you on the carpet.  
 T: Place 3 cubes next to your 10 cubes.  
 T: On your personal board, write the number of cubes that you placed in front of yourself.  
 T: (Students write 13.) Say the number.  
 S: Ten three! Thirteen!

Repeat process for several other teen numbers.

### Show Teen Numbers (3 minutes)

Materials: (S) One stick of 10 linking cubes that are the same color, 10 loose cubes of a different color

- T: Hold up your stick of 10 cubes.  
 T: Show me 11 cubes. Say the number the Say Ten way.  
 S: Ten one.

T: Take off the extra one and put it back in the pile of 10 ones.

Repeat process for several other teen numbers.

### Count the Say Ten way (3 minutes)

T: Let's count the Say Ten way.

Guide the students to count forward and backward between 10 and 20.

### Application Problem (7 minutes)

**MP.2** Peter was sitting at lunch eating his French fries. He counted 8 left on his plate. He ate 1 French fry. He ate another French fry. Then he ate another French fry. How many French fries did Peter have then?

Note: The purpose of this application problem is to simply prepare students for thinking about 1 less. Eight. 1 less is 7. Seven. 1 less is 6.



### Concept Development (26 minutes)

Materials: (S) 2 sets of 10 linking cubes for each student (10 in one color and 10 in another color), sentence frame  
( \_\_\_\_\_. 1 less is \_\_\_\_\_. )

Note: Please notice that we are not saying "19 is one less than 20." This is very complex linguistically for many kindergarten students who can say "19 is less than 20" without quantifying the difference. We simply are extending the "one more" lesson to "one less" as an opportunity for the students to do counting of teen numbers in a linear configuration, the tower (**K.CC.5**).

T: Build a tower with all the cubes of one color.

T: How many cubes are in your tower?

S: Ten!

T: How many ones is that?

S: 10 ones!

T: Now build a tower using the other cubes.

T: How many cubes are in this tower?

S: Ten!

T: Join the two towers. What is 10 ones and 10 ones?

#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Challenge your students who are above grade level by providing them with extensions of the Application Problem to solve. Ask, "If Peter ate two fries at a time, how many would he have then?", "If Peter started with 18 fries and ate one at a time, how many would he have left?", and "If Peter had 50 fries and he ate 1 and then another and then another, how many would he have then?"

- S: Twenty! 2 tens!
- T: How can we show 19?
- S: Take off 1 cube. (Students remove one cube.)
- T: Say this with me: “20. 1 less is 19.” (Use sentence frame for support.)
- S: 20. 1 less is 19.
- T: Take off one cube. Be sure to take the same color cube as before. Talk to your partner. How many cubes are in your tower now?
- S: (After they figure it out.) 18!

Students continue in this manner, taking off one cube each time, down to 10. As they remove each cube have them express the relationship of each number to the preceding number, e.g., Eighteen. 1 less is 17. As in the preceding lesson, release the students to work independently as soon as possible.

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

As students color the squares and write the numbers to complete the pattern, have them continue to say the relationship of each number to its preceding number, e.g., 13. 1 less is 12. 12. 1 less is 11.

### Student Debrief (8 minutes)

**Lesson Objective:** Represent numbers 20 to 11 in tower configurations decreasing by 1—a pattern of *1 smaller*.

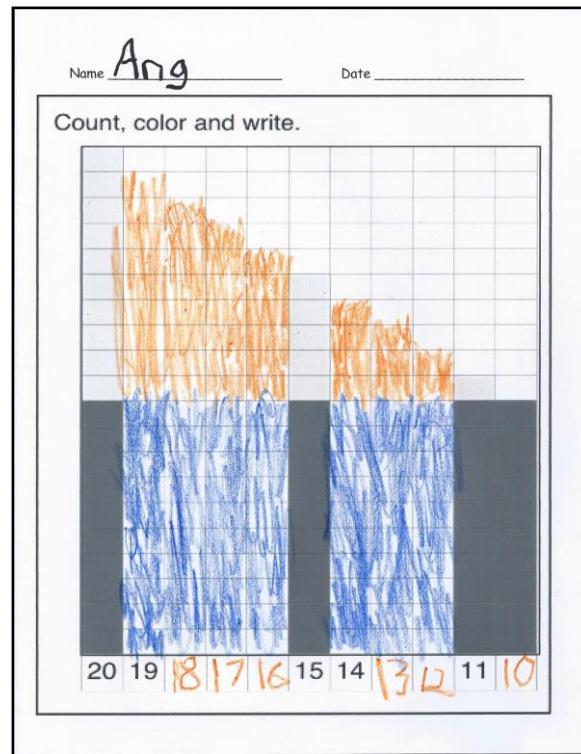
The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

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, taking turns reading the numbers forward and back. 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.

- What do you notice when you look at your work?
- How is your drawing like the towers you made?

#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Give your English language learners extra time to allow them to process the meanings of the essential terms in your lesson before calling for responses. Review and post key vocabulary (cube, more, less, remove) and allow extra conversation time while they are working.



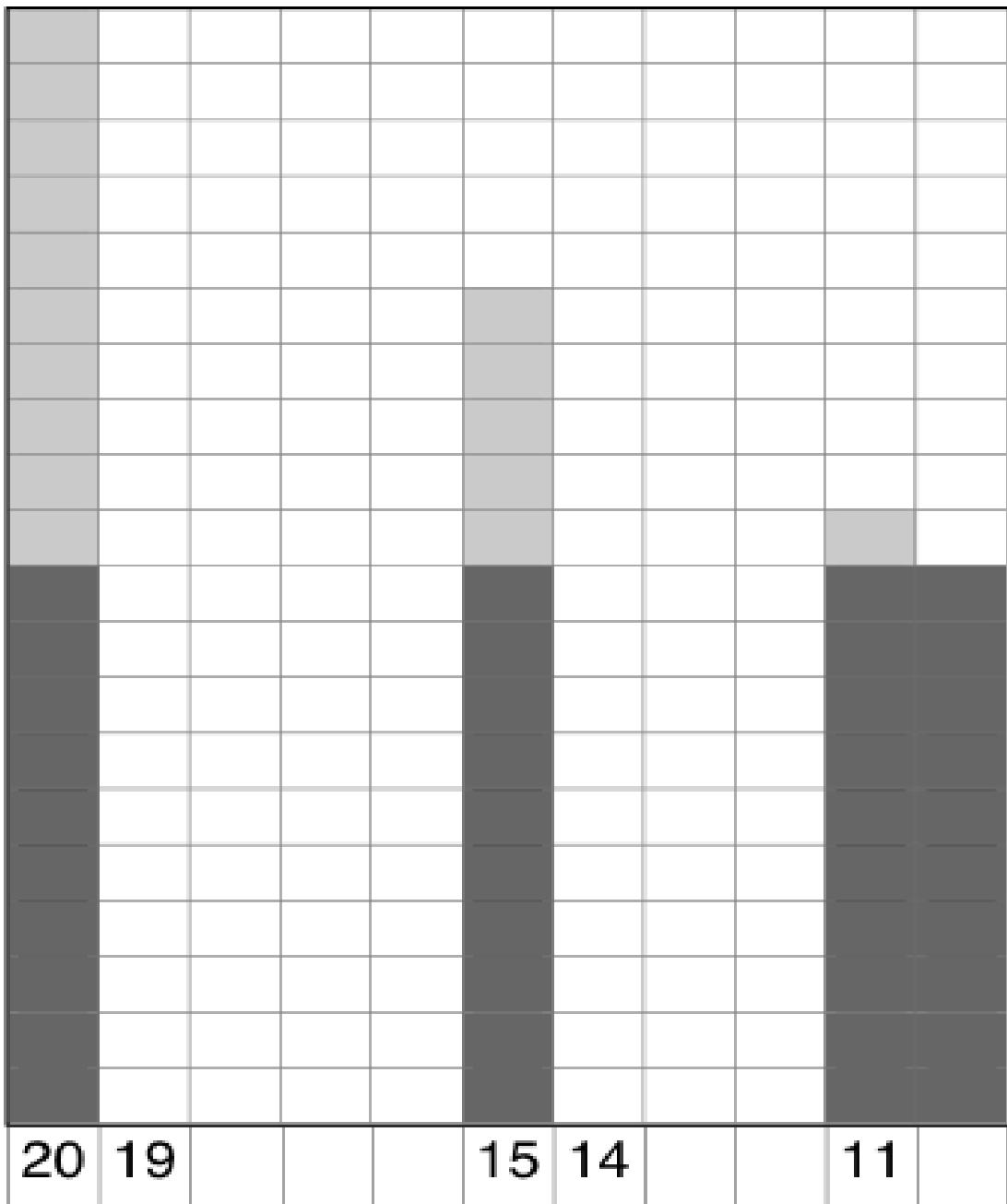
- How many cubes did you remove from your tower each time?
- When you take one off, does the number get bigger or smaller?
- How is this work similar to the story problem of the French fries?
- How is what we did today alike and different from what we did yesterday?

**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.

Name \_\_\_\_\_

Date \_\_\_\_\_

**Count, color and write.**

Name \_\_\_\_\_

Date \_\_\_\_\_

Write the missing numbers, counting down.

14,      13,      12,      11, \_\_\_\_\_

15,      14,      \_\_\_\_\_,      12      \_\_\_\_\_,      \_\_\_\_\_,

13,      12,      \_\_\_\_\_,      \_\_\_\_\_,      \_\_\_\_\_,

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

Write the missing numbers. Then draw X's and O's to complete the pattern.

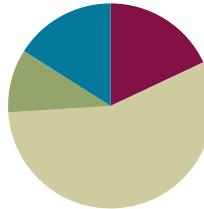
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| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| X  | X |    |  |    |  |    |    |    |  |    |  |
| O  | O |    |  |    |  |    |    |    |  |    |  |
| O  | O |    |  |    |  |    |    |    |  |    |  |
| O  | O |    |  |    |  |    |    |    |  |    |  |
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| O  | O |    |  |    |  |    |    |    |  |    |  |
| 20 |   | 18 |  | 16 |  | 14 | 13 | 12 |  | 10 |  |

## Lesson 13

Show, count, and write to answer *how many* questions in linear and array configurations.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (9 minutes)         |
| Application Problem | (5 minutes)         |
| Concept Development | (28 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (9 minutes)

- Count the Say Ten way **K.NBT.1** (3 minutes)
- Show Teen Numbers **K.NBT.1** (3 minutes)
- Write Teen Numbers with Tower Configurations **K.CC.3** (3 minutes)

### Count the Say Ten way (3 minutes)

T: Let's count the Say Ten way.

Guide the students to count forward and backward between 10 and 20.

### Show Teen Numbers (3 minutes)

Materials: (S) Two sticks of 10 linking cubes that are different colors

T: There are 10 cubes on each of your sticks. Connect your 2 cube sticks.

S: (Students connect cube sticks.)

T: Say the number the Say Ten way.

S: 2 tens.

T: Take away 1 cube and put it on the carpet space in front of you.

Students take away one cube and put it on the carpet space in front of them.

T: Say how many you have now the Say Ten way.

S: Ten nine.

T: Say how many you have the regular way.

S: Nineteen.

Repeat process for three or four other teen numbers.

### Write Teen Numbers with Tower Configurations (3 minutes)

Materials: (T) One stick of 10 linking cubes that are the same color, 10 loose cubes of a different color, personal white boards

T: (Hold a tower of 12 connected linking cubes with the bottom 10 different color than the top 2.) Write the number on your personal white board.

S: (Students write 12.)

T: Say the number the Say Ten way.

S: Ten two.

T: Say the number the regular way.

S: Twelve.

Repeat process for several other teen numbers.



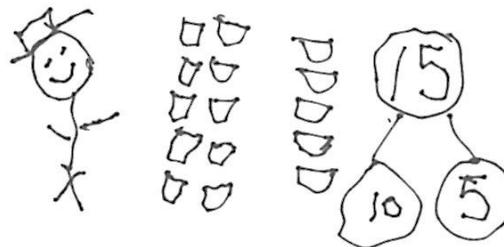
#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Provide students with disabilities learning aids in the form of counters to model the Application Problem. Give them a number bond template to complete the task. Scaffolding the Application Problem allows students with disabilities to complete the task and focus on the lesson.

### Application Problem (5 minutes)

Vincent's father made 15 tacos for the family. Show the 15 tacos as 10 tacos and 5 tacos. Draw a number bond to match.

Note: This application problem is a simple experience of decomposition (**K.NBT.1**). We can ask students to draw the decomposition in 5-groups, another name for a ten-frame configuration, but which has the advantage of emphasizing the five.



### Concept Development (28 minutes)

Materials: (S) 2 sticks of 10 linking cubes with a color change at the five per student, Rekenrek, set of Hide Zero cards per pair of students

T: Count in order from 1 to 20.

S: 1, 2, 3, ... 20.

T: Count from 10 to 20 the Say Ten way.

S: Ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight, ten nine, 2 tens.

T: Partner A, show the number that is one more than 13 on the Rekenrek.



#### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Introduce the term "one more" to English language learners by modeling it. Show two linking cubes, and say "one more" as you add another cube to the two. Practice asking, "how many" questions and count with them until they get accustomed to answering the question.

- T: Partner B, show the number that is one more than 13 with the Hide Zero cards.  
T: Check that you are each showing the same number. What is the number?  
S: 14.  
T: Count from 14 up to 20.  
S: 14, 15, 16, 17, 18, 19, 20.  
T: Partner B, show the number that is one more than 7 on the Rekenrek.  
T: Partner A, show the number that is one more than 7 with the Hide Zero cards.  
T: What is the number?  
S: 8.  
T: Count from 8 up to 20.

Repeat with two more numbers so that each partner uses both representation tools twice more.

- T: (Pass out the linking cubes.)

Have students connect the linking cubes to create a continuous number train to 20. Have them count to see they have 2 sticks of 10 ones.

- T: Show me ten seven cubes.  
T: (Once they have finished.) How many cubes is that?  
S: Ten seven, seventeen!  
T: Make your long number train of 2 sticks of 10 again. Break it and put 1 stick below the other. How many cubes do you have now?  
S: (Let them count again if they need to.) 10 here and 10 here, 2 tens, twenty!!

Have students break the linking cube sticks at the color change. Have them place the shorter sticks one below the other. Guide students to place the sticks in four rows and re-count the cubes from left to right starting from the top with number 1, and continuing this way to the fourth row of 16 to 20. Have them re-count to get better at it. They will enjoy the chance to re-count.

- T: (Once they have finished.) How many cubes did you count?  
S: 20.  
T: (Revisit the process.) Put the sticks back into one train from 1 to 20. Count. Break the stick into two sticks of 10 cubes. Count. Break the sticks to make 4 sticks of 5. Count.  
T: (Once they have finished.) How many cubes do you have now? Count to check.  
S: 20.

Before doing the Problem Set, give the students a personal white board or blank paper and have them use their 10-sticks to draw what they just did in the lesson.

### Problem Set (7 minutes)

Distribute Problem Sets to students. Students should do their personal best to complete the Problem Set within the allotted 10 minutes.



## Student Debrief (8 minutes)

**Lesson Objective:** Show, count, and write to answer *how many* questions in linear and array configurations.

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

Have students always check their work with a partner once they bring it to the carpet. Encourage them to notice, if they don't, that the number of ducks is the same. Ask, "How do they look different?" "Is there another way we can put the 16 ducks?"

Be sure they compare how they showed 15 and 12 in rows in the last two problems. Then possibly discuss:

T: Count the cubes as I lay them down.  
(Place 10 ones in a horizontal line.)

S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

T: What is one more than 10? (Add a cube.)

S: 11.

T: One more than 11? (Add a cube.)

S: 12.

T: How many cubes do you see?

S: 12.

T: (Slide the cubes into a vertical line.) Do I still have 12 cubes? How do you know?

T: (Slide the cubes into different rectangular array configurations, asking after each change, "How many do I have now?")

Guide students to see that the number of objects is the same regardless of how they are arranged. Let them close the lesson by showing 12 cubes in different rows to a partner. (Rows do not have to be complete.)

## 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.

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

The duckies found some tasty fish to eat in the boxes! Count up on the number path.

1. Which numbers have duckies on them?

12 14 16 18 20

2. Which numbers have duckies on them?

11 15 16 19 20

COMMON CORE | Lesson #: 1/6/13 | Lesson Name EXACTLY

engage<sup>ny</sup>

How many duckies do you count?

3. 16      4. 16

5. In the space below, draw 15 circles in rows.

6. In the space below, draw 12 squares in rows.

COMMON CORE | Lesson #: 1/11/13 | Lesson Name EXACTLY GK-M5-TC-L13.docx

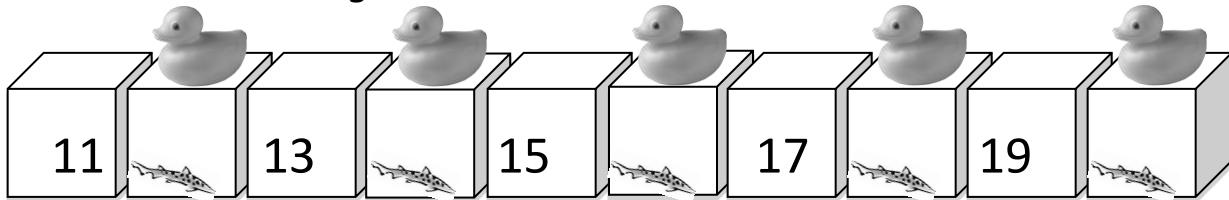
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Name \_\_\_\_\_

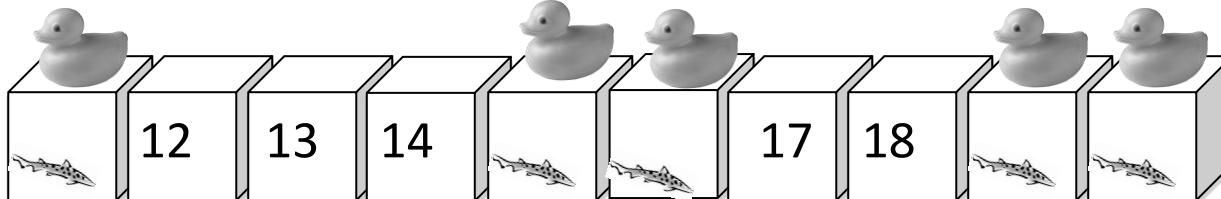
Date \_\_\_\_\_

The ducks found some tasty fish to eat in the boxes!  
Count up on the number path.

1. Write the missing numbers that have ducks on them.

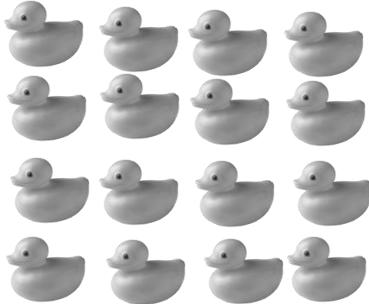


2. Write the missing numbers that have ducks on them.

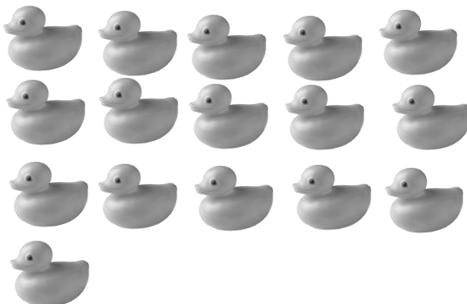


How many ducks do you count?

3. \_\_\_\_\_



4. \_\_\_\_\_



5. In the space below, draw 15 circles in rows.

6. In the space below, draw 12 squares in rows.

Name \_\_\_\_\_

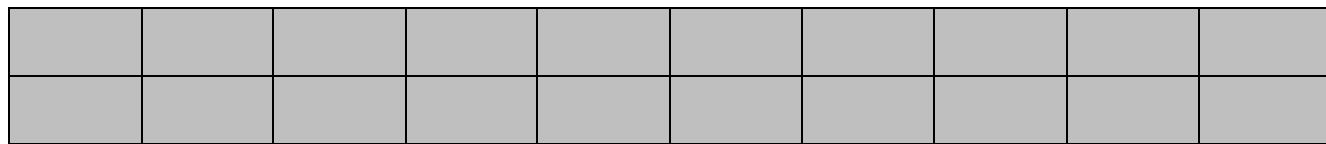
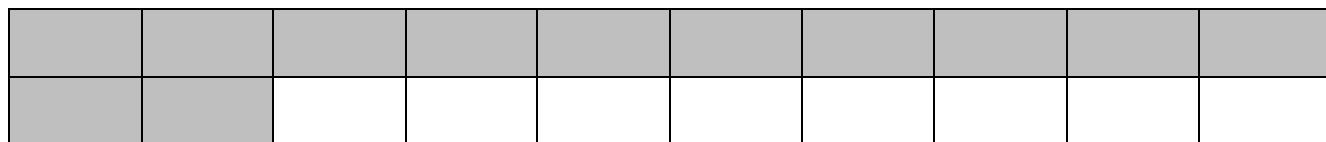
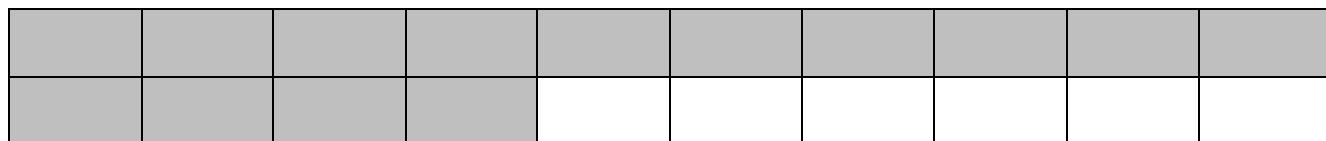
Date \_\_\_\_\_

Count and write how many.



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Look at the 3 sets of blocks below. Count the shaded blocks in each set. Circle the set that has the same number of shaded blocks as stars.

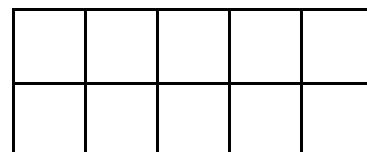
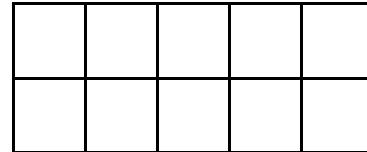
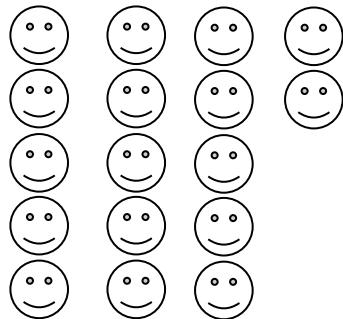
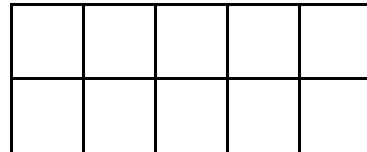
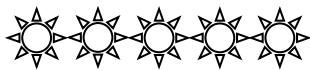
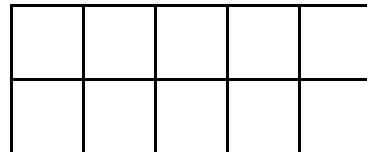
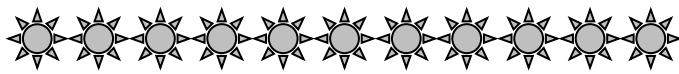
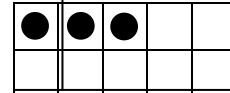
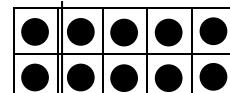


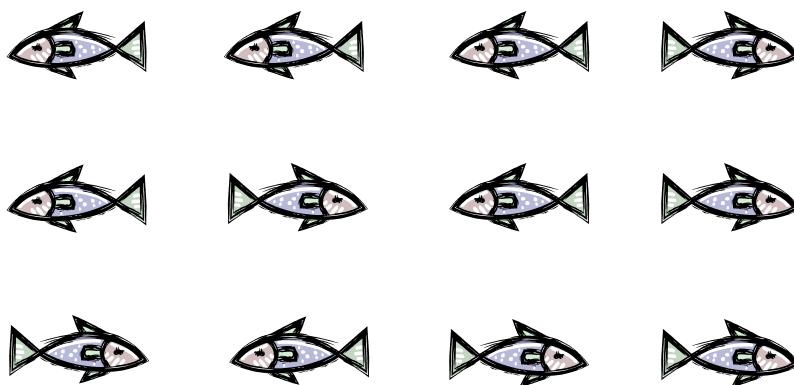
Early finishers: Which was easier to count? Why?

Name \_\_\_\_\_

Date \_\_\_\_\_

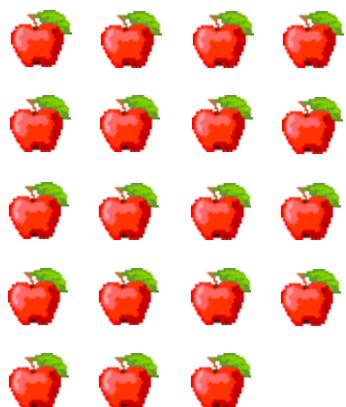
Count the objects. Draw dots to show the same number on the double ten frames.





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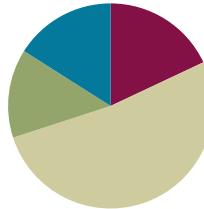
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## Lesson 14

Show, count, and write to answer *how many* questions with up to 20 objects in circular configurations.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (9 minutes)         |
| Application Problem | (7 minutes)         |
| Concept Development | (26 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (9 minutes)

- Write Teen Numbers with Arrays **K.CC.3** (3 minutes)
- Hide Zero for Teen Numbers **K.NBT.1** (3 minutes)
- Teen Counting Array Template **K.CC.5** (3 minutes)

### Write Teen Numbers with Arrays (3 minutes)

Materials: (T) Pre-drawn arrays (S) Personal white boards

- T: (Project a 5 by 3 array of stars.) Write the number of stars that you see on your personal boards.  
 S: (Students write 15.)  
 T: Say the number the Say Ten way.  
 S: Ten five.  
 T: Say the number the regular way.  
 S: 15.

Repeat process for three or four other teen numbers.

### Hide Zero for Teen Numbers (3 minutes)

Materials: (T) Hide Zero cards

- T: (Hold 10 card and 5 card so that it appears as 15.) Say the number.  
 S: 15.  
 T: Say the number the Say Ten way.

S: Ten five.

Break apart the cards into 10 and 5. Repeat process for other teen numbers.

### Teen Counting Array Template (3 minutes)

Materials: (S) Teen Counting Array template

Distribute Teen Counting Array template. Have students count how many are in each array.

### Application Problem (7 minutes)

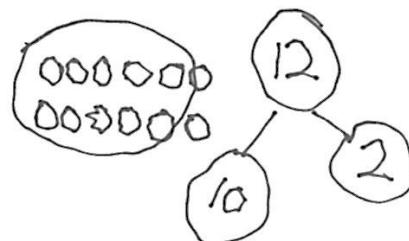
Eva put her 12 cookies on her cookie sheet in 2 rows of 6. Draw Eva's cookies. Show her 12 cookies as a number bond of 10 ones and 2 ones and with your Hide Zero cards. Then, find and circle the 10 cookies that are inside the 12 cookies.

Have the students explain how the parts of the number bond match the parts of their drawing and the Hide Zero cards with a partner.



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Scaffold the application problem for English language learners by adding gestures when reading the Application Problems. Hold your arms straight out when you read "rows" and make a large circle with your arms as you read the direction "circle the 10".



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

For students below grade level, scaffold Concept Development work. Provide a plate with 20 empty circles drawn around the edge. This will serve as a visual container for students when they are showing numbers up to 20. For further support, label the circles with numbers 1–20 to help students with sorting.



### Concept Development (26 minutes)

Materials: (S) Per pair of students: Numeral cards from 10–20, paper plate or round mat, bag of 20 counting objects; double ten-frame mat inside a personal white board for each student

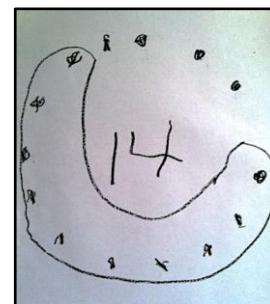
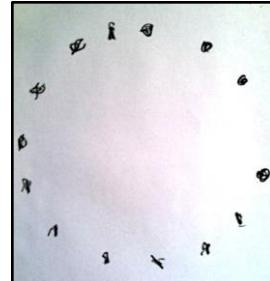
- T: Let's see how well you can show, count, and write numbers!
- T: Partner A, draw a card and tell your partner the number. You can say the number the regular way or the Say Ten way.
- T: Partner B, put that number of objects around the outside edge of your mat. (Guide them to use the edge of the plate to make a circular configuration.)
- T: Now take turns counting the objects. How many are there?
- T: Partner B, now you get to draw the card and Partner A will show it.
- T: Count the objects. How many are there?

Repeat the process two or three times.

- T: Let's try something different. We won't use the number cards for this.
- T: Partner A, put any number of objects you want in a circle around the edge of your plate.
- T: Partner B, count the objects and write the number on the personal white board.
- T: Now Partner B gets to put any number of objects in a circle around the edge of the plate, and Partner A counts them and writes the number on the personal white board.

Repeat the process two or three times.

- T: This time, Partner A, write any number between 11 and 20 on your personal white board. Partner B, count out that many objects as you place them in a circle around the edge of the plate. How many objects are there?
- T: Partner A, count each object as you move it from the circle to the ten-frame to check that the count is correct. How many objects are there?
- T: Now Partner B, you get to write any number between 11 and 20 on your personal white board. Partner A, count out that many objects as you place them in a circle around the edge of the plate. How many objects are there?
- T: Partner B, count each object as you move it from the circle to the ten-frame to check that the count is correct. How many objects are there?



Repeat the process two or three times.

Before using the Problem Set, have students use the plate to draw dots in a circular shape and count each other's dots. Have them circle 10 dots to prove they counted right (as pictured to the right).

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

### Student Debrief (8 minutes)

**Lesson Objective:** Show, count, and write to answer *how many* questions with up to 20 objects in circular configurations.

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

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

Whisper count how many objects there are.. Write the number.

|           |           |
|-----------|-----------|
|           |           |
| <b>14</b> | <b>12</b> |
|           |           |
| <b>15</b> | <b>18</b> |

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engage<sup>ny</sup>

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, taking turns reading the numbers forward and back.

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.

- What do you notice about all of the pictures?
- Is it easier or harder for you to count objects when they are in circles like these pictures? Why?
- Which way is easiest for you to count, when we show the number in a circle or when we show it as a tower? Why?
- Did the number change when you moved the objects from the circle to the ten-frame? Why?
- (Show objects in a circle configuration and have students count how many. Then slide the objects to change the circle into a line.) How can you prove that the number is still the same? Tell your partner. Did he prove it to you? What are some ways you proved it? Which ways were the most convincing?

**MP.3**

### 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.

Whisper count and draw in more shapes to match the number.

Early finishers, write your own teen number in the box. Draw a picture to match your number.

**COMMON CORE** | Lesson #: \_\_\_\_\_ Date: \_\_\_\_\_ Lesson Name EXACTLY 1/18/13

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#### NOTES ON

#### MULTIPLE MEANS OF ENGAGEMENT:

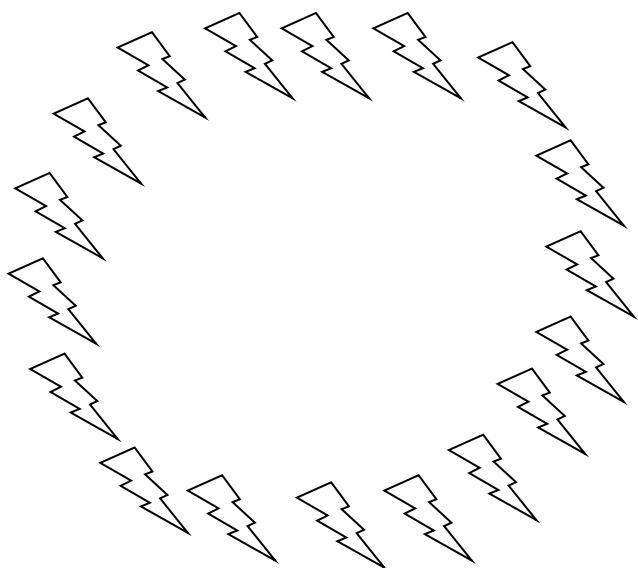
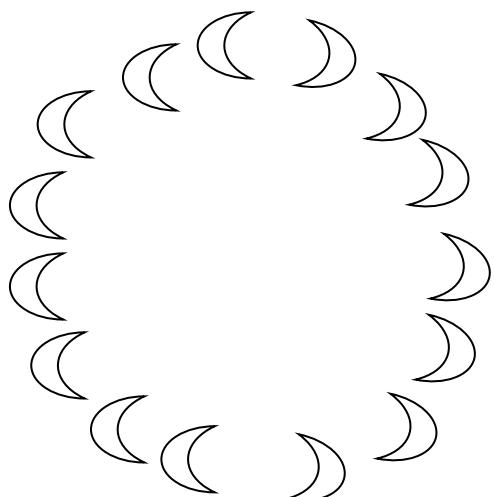
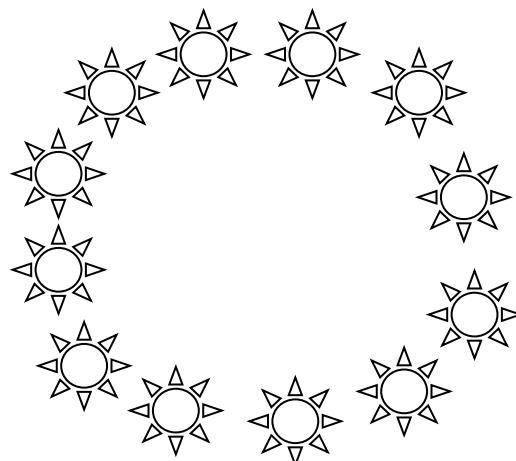
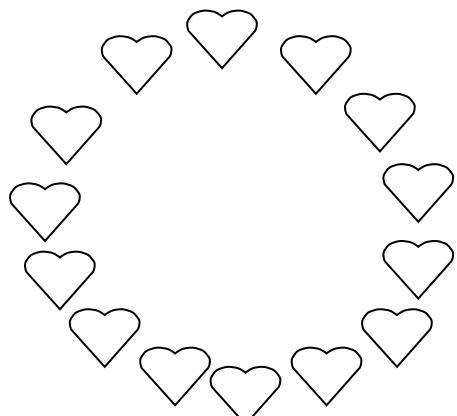
For students above grade level, provide opportunity for deeper understanding.

- Ask students how many different ways they can count the objects.
- Possible answers: by ones, by twos, by threes, by counting a ten, and then counting the remaining objects.

Name \_\_\_\_\_

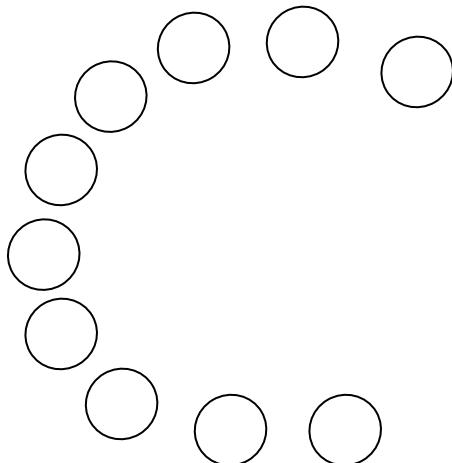
Date \_\_\_\_\_

Whisper count how many objects there are. Write the number.

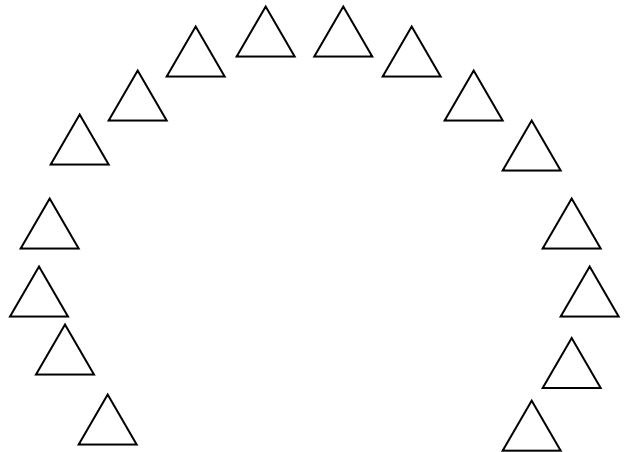


Whisper count and draw in more shapes to match the number.

13



20

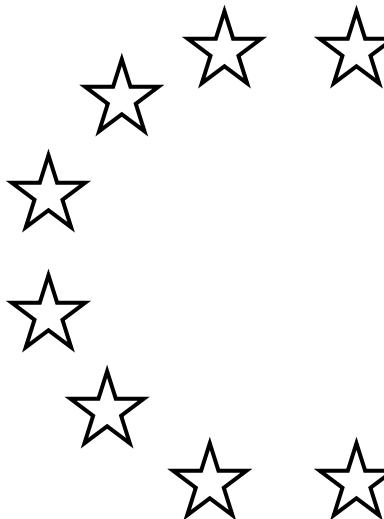


Early finishers: Write your own teen number in the box. Draw a picture to match your number.

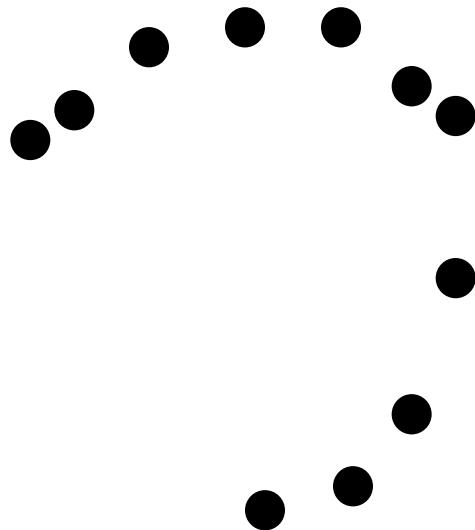
Name \_\_\_\_\_

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Count the stars. Write the number in the box.



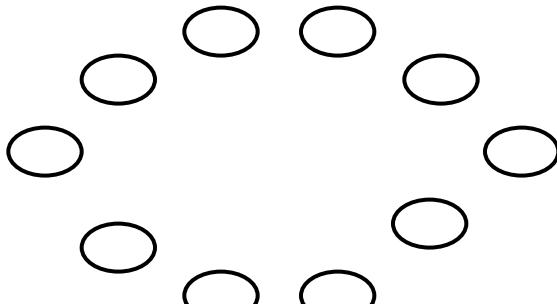
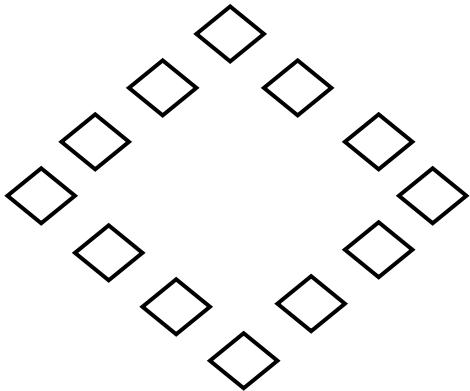
Whisper count and draw in more dots to match the number.

 15

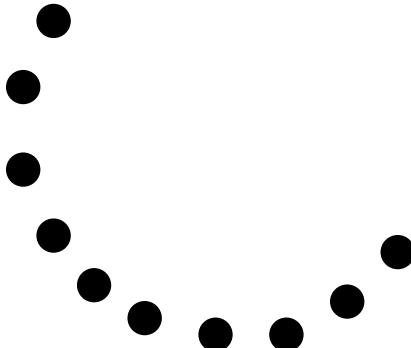
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Date \_\_\_\_\_

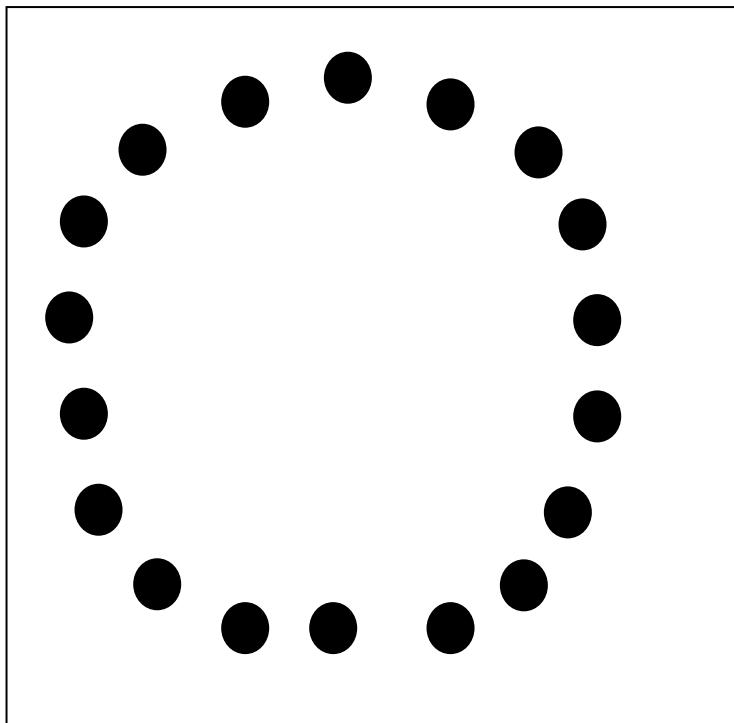
Count the objects in each group. Write the number in the boxes below the pictures.



Count and draw in more shapes to match the number.

 19

Count the dots. Draw each dot in the ten-frame. Write the number in the box below the ten-frames.



|  |  |  |  |  |
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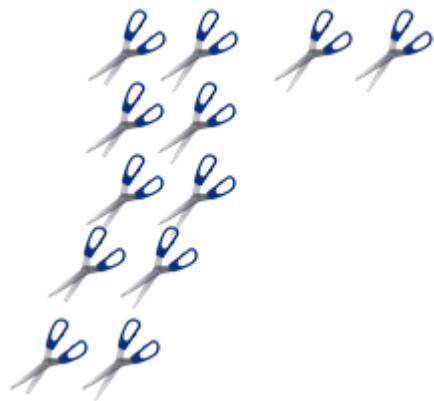
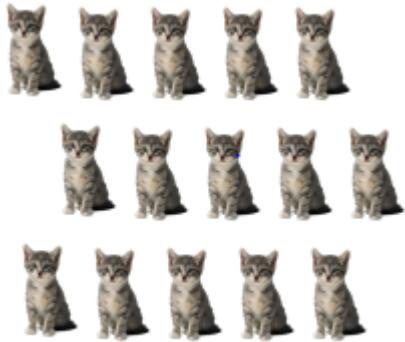
Write a teen number in the box below. Draw a picture to match your number.

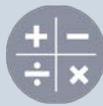
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Name \_\_\_\_\_

Date \_\_\_\_\_

Count the objects in each group and write the number.





## Topic D

# Extend the Say Ten and Regular Count Sequence to 100

**K.CC.1, K.CC.2, K.CC.3, K.CC.4c, K.CC.5, K.NBT.1, 1.NBT.1**

|                               |                  |   |
|-------------------------------|------------------|---|
| <b>Focus Standard:</b>        | K.CC.1<br>K.CC.2 | Count to 100 by ones and by tens.<br>Count forward beginning from a given number within the known sequence (instead of having to begin at 1). |
| <b>Instructional Days:</b>    | 5                |   |
| <b>Coherence -Links from:</b> | GPK–M5           | Write Numerals to 5, Addition and Subtraction Stories, Count to 20  |
| <b>-Links to:</b>             | G1–M2            | Place Value, Comparison, Addition and Subtraction of Numbers to 20  |

Topic D leads students beyond teen numbers up to 100 (**K.CC.1**). They begin by counting up and down to 100 both the regular way (ten, twenty, thirty...) and the Say Ten way (ten, 2 tens, 3 tens...). In Lessons 16 to 18, their work from 11 to 19 sets the foundation for success as they realize the number sequence of 1–9 is repeated over and over again within each decade as they count to 100. Students begin by counting within and then across decades (e.g., 28, 29, 30, 31, 32) (**K.CC.2**). Students also write the numbers 21 to 100 in Lessons 15 to 17, which goes beyond the Kindergarten standard to the Grade 1 standard **1.NBT.1**. Writing numerals 21 to 100 is included here because of the wider range of activities they make possible; students readily accept this challenge, which will not be assessed. The final lesson is an optional exploration of decomposing numbers to 100 on the Rekenrek.

**A Teaching Sequence Towards Mastery of Extending the Say Ten and Regular Count Sequence to 100**

**Objective 1:** Count up and down by tens to 100 with Say Ten and regular counting.  
(Lesson 15)

**Objective 2:** Count within tens by ones.  
(Lesson 16)

**Objective 3:** Count across tens when counting by ones through 40.  
(Lesson 17)

**Objective 4:** Count across tens by ones to 100 with and without objects.  
(Lesson 18)

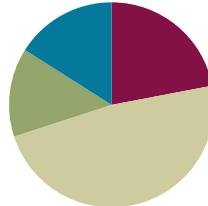
**Objective 5:** Explore numbers on the Rekenrek. (Optional)  
(Lesson 19)

## Lesson 15

**Objective:** Count up and down by tens to 100 with Say Ten and regular counting.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (11 minutes)        |
| Application Problem | (7 minutes)         |
| Concept Development | (24 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### A NOTE ON STANDARDS ALIGNMENT:

In this lesson, students write multiples of 10 through 100 which bridges Kindergarten content of writing numbers to 20 (**K.CC.3**) to Grade 1 content of writing numbers to 120 (**1.NBT.1**).

### Fluency Practice (11 minutes)

- Write Teen Numbers with Circular Configurations **K.CC.3** (3 minutes)
- Teen Circular-Counting **K.CC.5** (5 minutes)
- Hide Zero for Teen Numbers **K.NBT.1** (3 minutes)

### Write Teen Numbers with Circular Configurations (3 minutes)

Materials: (T) Pre-drawn circular configurations (S) Personal white boards

- T: (Project a circular array of 13 stars.) Write the number of stars that you see on your personal white boards.  
 S: (Students write 13.)  
 T: Say the number the Say Ten way.  
 S: Ten three.  
 T: Say the number the regular way.  
 S: 13.

Repeat process for 3 or 4 other teen numbers.

### Teen Circular-Counting (5 minutes)

Materials: (S) Teen circular-counting fluency template

## Hide Zero for Teen Numbers (3 minutes)

Materials: (T) Hide Zero cards

- T: (Hold 10 card and 7 card so that it appears as 17.) Say the number.  
 S: 17.  
 T: Say the number the Say Ten way.  
 S: Ten seven.

Break apart the cards into 10 and 7.

Repeat this process for additional teen numbers.

## Application Problem (7 minutes)

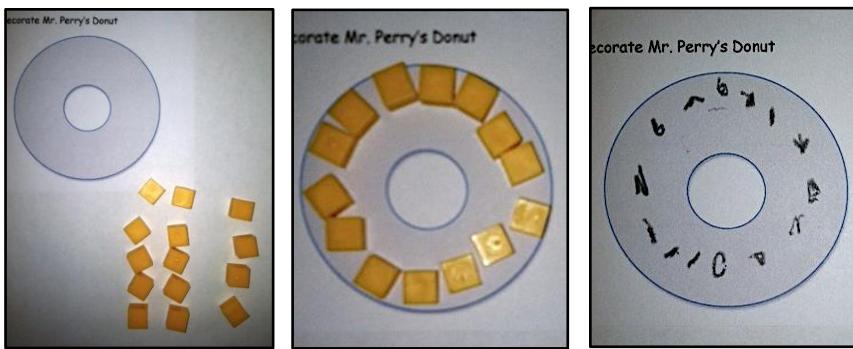
Materials: (S) Donut template, cubes, pencil

Mr. Perry is decorating donuts. He puts 14 little dots of chocolate in a circle. Show him an idea about how to put the 14 dots in a circle on his donut. Use your cubes first and then draw the chocolate dots on. Show the total number of dots of chocolate with a number bond and your Hide Zero cards.



### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Scaffolds the application problem for English language learners by giving them sentence starters to help them express how they tackled the challenge. For example, “I put \_\_\_\_ dots of chocolate on the donut.”



## Concept Development (24 minutes)

Materials: (T) 100-bead Rekenrek (S) Set of 10 small ten-frame cards per student

- T: (Invite students to the carpet and display the Rekenrek.) Count the beads as I move them.  
 (Slide each bead from right to left.)  
 S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.  
 T: How many beads are in this row?

- S: 10.
- T: (Point to the beads in the second row.) How many beads are in this row?
- S: 10.
- T: How can you tell there are ten beads?
- S: I see 5 red beads and 5 white beads, and 5 and 5 is 10. → It looks just like the first row.
- T: So each row has how many beads?
- S: 10.
- T: Let's count all the beads. Should we count by ones or by tens? Which way is faster?
- S: By tens!
- T: Let's count by tens. (Slide each row from right to left as they count.)
- S: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100!
- T: Now let's count back. (From the bottom, sliding each row from left to right.)
- S: 100, 90, 80, 70, 60, 50, 40, 30, 20, 10.



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Scaffold the lesson for students who are below grade level by having them work in a small group with the Rekenrek. Lead them in counting the Say Ten way while they move the row of beads.

Have students return to their seats and pass out ten ten-frame cards to each child.

- T: Lay your ten-frame cards out at the top of your table.
- T: Let's count them the Say Ten way.
- S: Ten, 2 tens, 3 tens, 4 tens, 5 tens, 6 tens, 7 tens, 8 tens, 9 tens, 10 tens.
- T: And now count them the regular way.
- S: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.
- T: I will say a number the Say Ten way. Pull down that many cards in front of you.
- T: 3 tens.
- S: (Show three cards.)
- T: Count up by tens and tell me how many.
- S: 10, 20, 30.
- T: Use your finger and write 30 on your table.
- T: Now slide each card back to the top of your table, and count down by ten as you do so.
- S: 30, 20, 10.
- T: Here's a new number. 8 tens.
- S: (Show eight cards.)
- T: Count up by tens and tell me how many.
- S: 10, 20, 30, 40, 50, 60, 70, 80.
- T: Use your finger and write 80 on the table.
- T: Slide each card back and count down by ten as you go.
- S: 80, 70, 60, 50, 40, 30, 20, 10.



#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Challenge students who are above grade level by placing the ten card and two ones on the table. Have them count by tens starting with twelve (12, 22, 32, 43, 52, and so on).

Repeat with the other tens.

### Problem Set (6 minutes)

Students should do their personal best to complete the Problem Set within the allotted 6 minutes.

Note: This Problem Set asks students to write numbers greater than 20 which is a Grade 1 standard (**1.NBT.1**). If your students are not ready for this step, you might instead have them use numeral cards or simply tell the amount pictured.

After completing the Problem Set, have the students fold after 50 to see and analyze the same “stairs” from Lesson 11 as one more ten is placed on each row as pictured to the right below. While they work, encourage them to count both in the regular way and the Say Ten way.

### Student Debrief (8 minutes)

**Lesson Objective:** Count up and down by tens to 100 with Say Ten and regular counting.

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, taking turns reading the numbers forward and back. 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.

- How would the picture of the stairs be different if you were counting by ones?
- What kinds of things could we count by tens?
- Why is it helpful to count by tens?
- Practice more counting on the Rekenrek.

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

Count up by tens and write the numbers.

|                                     |     |
|-------------------------------------|-----|
| .....                               | 10  |
| ..... .....                         | 20  |
| ..... ..... .....                   | 30  |
| ..... ..... ..... .....             | 40  |
| ..... ..... ..... ..... .....       | 50  |
| ..... ..... ..... ..... ..... ..... | 60  |
| ..... ..... ..... ..... ..... ..... | 70  |
| ..... ..... ..... ..... ..... ..... | 80  |
| ..... ..... ..... ..... ..... ..... | 90  |
| ..... ..... ..... ..... ..... ..... | 100 |

COMMON CORE | Lesson #: \_\_\_\_\_ Date: \_\_\_\_\_ Lesson Name EXACTLY 1/8/13 engage<sup>ny</sup>

Help the puppy down the stairs! Count down by tens. Write the numbers.

Count up by tens, the Say Ten way.

|        |        |        |        |
|--------|--------|--------|--------|
| ten    | 2 tens | 3 tens | 4 tens |
| 5 tens | 6 tens | 7 tens | 8 tens |

COMMON CORE | Lesson #: \_\_\_\_\_ Date: \_\_\_\_\_ Lesson Name EXACTLY 1/8/13 engage<sup>ny</sup>

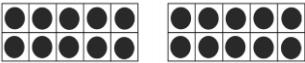
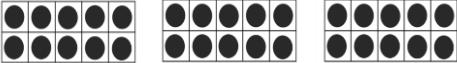
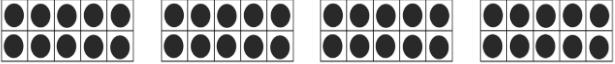
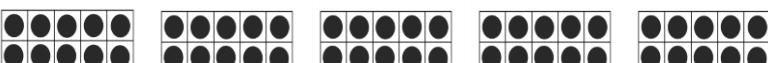
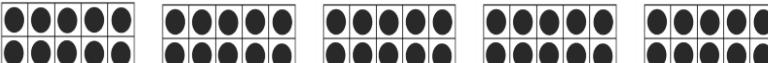
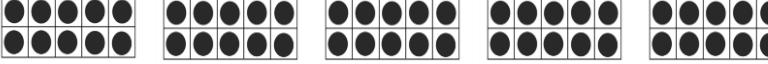
**Exit Ticket (3 minutes)**

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.

Name \_\_\_\_\_

Date \_\_\_\_\_

Count up by tens and write the numbers.

|   |    |
|---|----|
|    | 10 |
|    | 20 |
|    |    |
|    |    |
|    | 50 |
|  |    |
|  |    |
|  |    |
|  |    |
|  |    |

Help the puppy down the stairs! Count down by tens. Write the numbers.



100

90

60

20

Count up by tens the Say Ten way.

ten

\_\_\_\_\_ tens

3 tens

\_\_\_\_\_ tens

\_\_\_\_\_ tens

\_\_\_\_\_ tens

\_\_\_\_\_ - \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_

Count up and down by 10. Write the numbers.

|  |    |
|--|----|
|  | 10 |
|  |    |
|  |    |
|  |    |
|  | 40 |
|  |    |
|  |    |
|  |    |
|  |    |
|  |    |

Count down and up by 10 the Say Ten way.

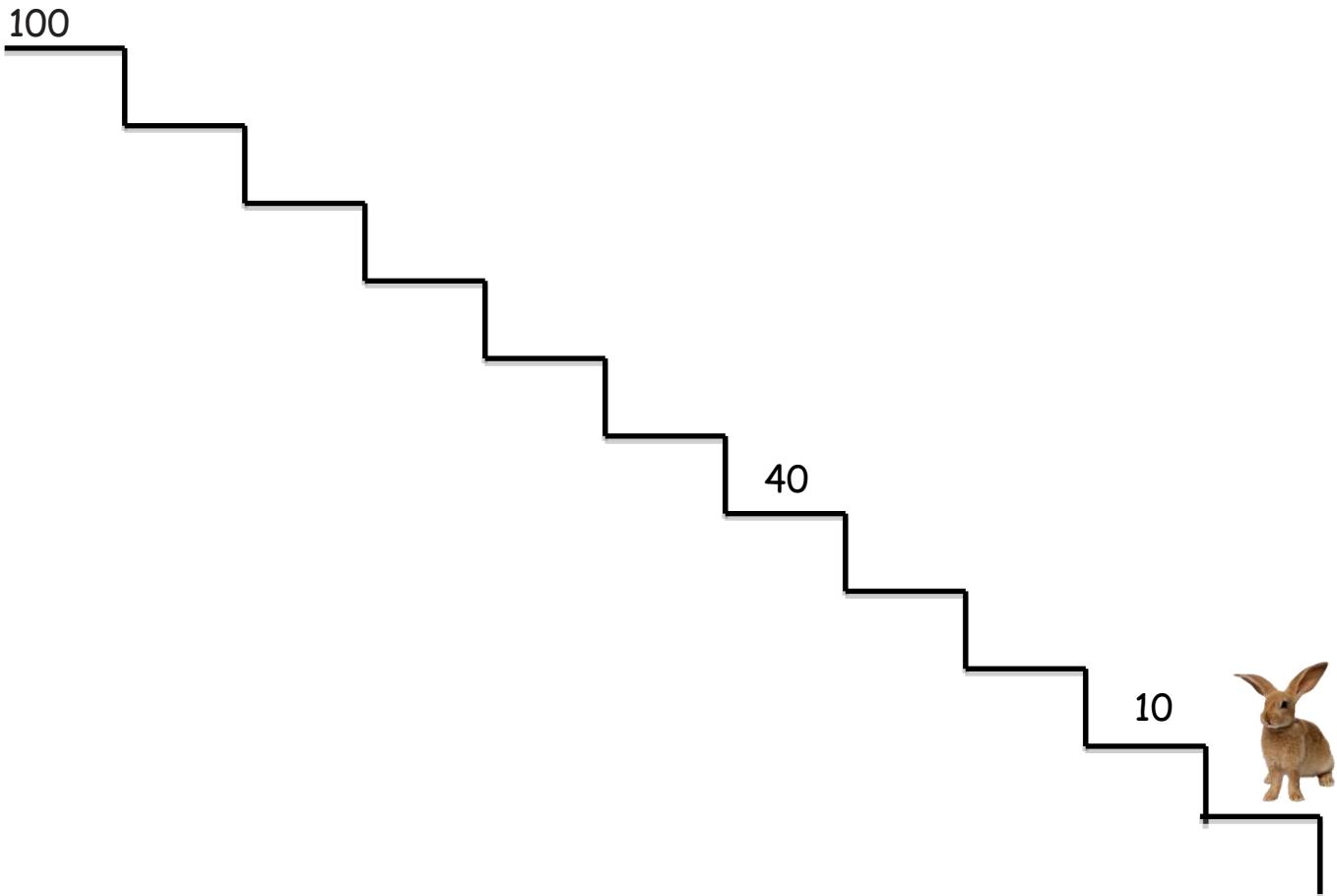
|  |     |         |
|--|-----|---------|
|  | 100 | 10 tens |
|  | 90  | tens    |
|  | 80  | tens    |
|  | 70  | 7 tens  |
|  | 60  | Tens    |
|  |     |         |

|  |    |        |
|--|----|--------|
|  | 50 | Tens   |
|  | 40 | 4 tens |
|  | 30 | tens   |
|  | 20 | tens   |
|  | 10 | 1 ten  |
|  |    |        |

Name \_\_\_\_\_

Date \_\_\_\_\_

Count down by 10 and write the number on top of each stair.



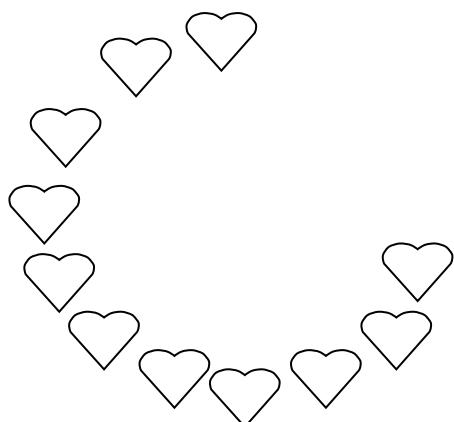
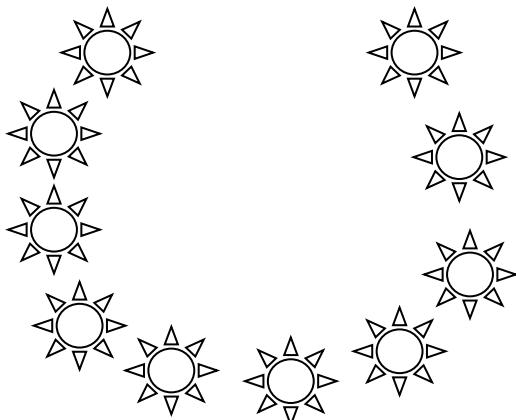
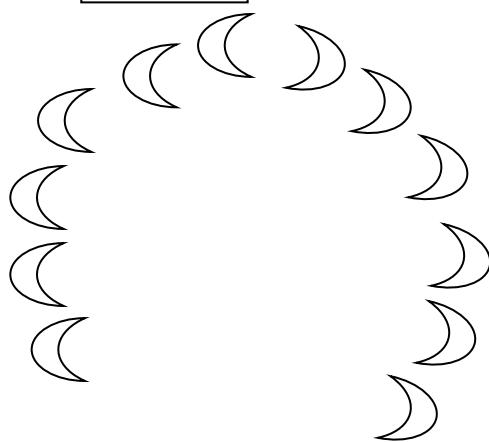
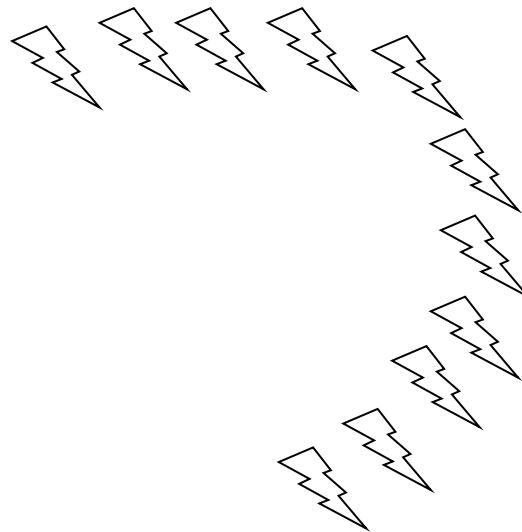
Count down the Say Ten way. Write the missing numbers.

|  |     |            |
|--|-----|------------|
|  | 100 |            |
|  |     | 9 tens     |
|  | 80  | _____ tens |
|  | 70  | _____ tens |
|  |     | 6 tens     |
|  |     | _____ tens |
|  | 40  | 4 tens     |
|  |     | _____ tens |
|  |     | _____ tens |
|  |     | _____ ten  |

Name \_\_\_\_\_

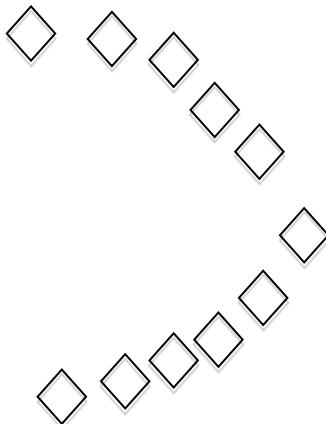
Date \_\_\_\_\_

Whisper count and draw in more shapes to match the number.

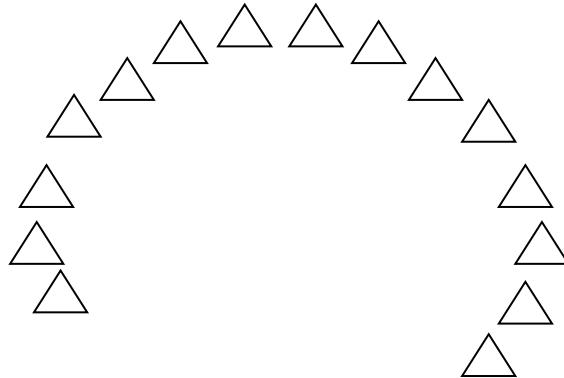
**14****12****15****17**

Whisper count and draw in more shapes to match the number.

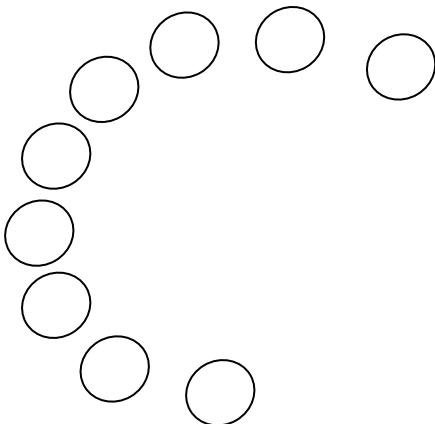
16



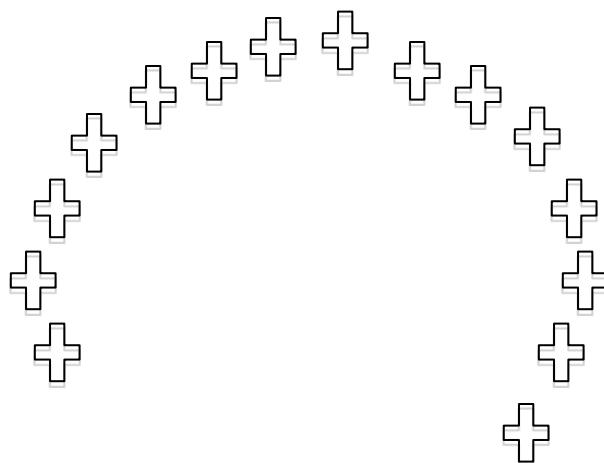
19



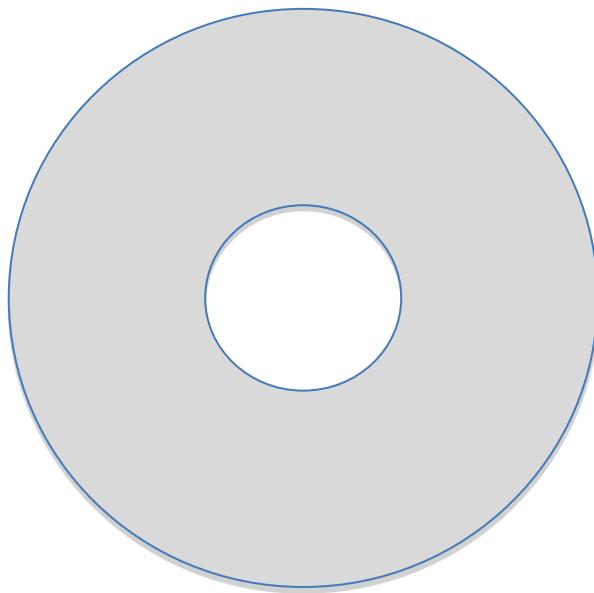
13



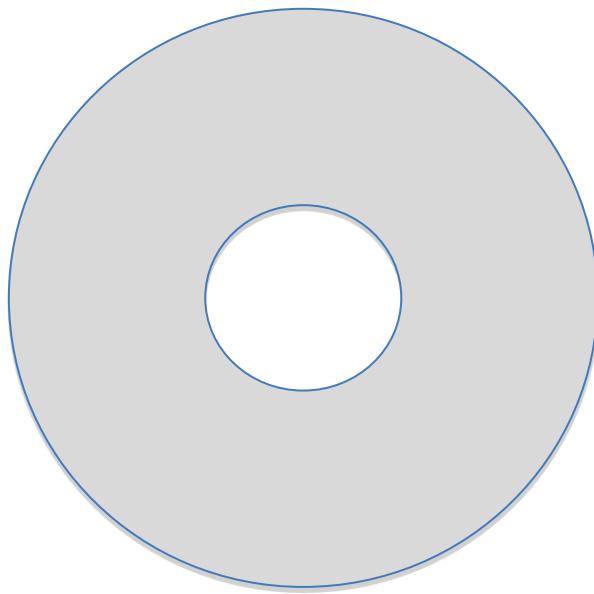
20



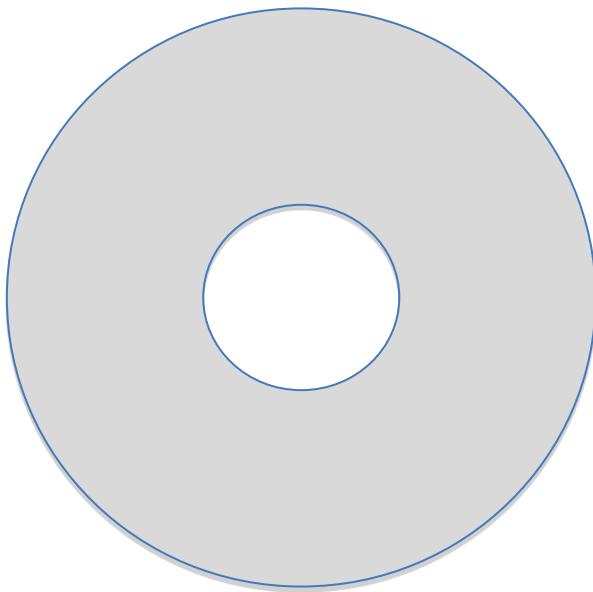
Decorate Mr. Perry's Donut



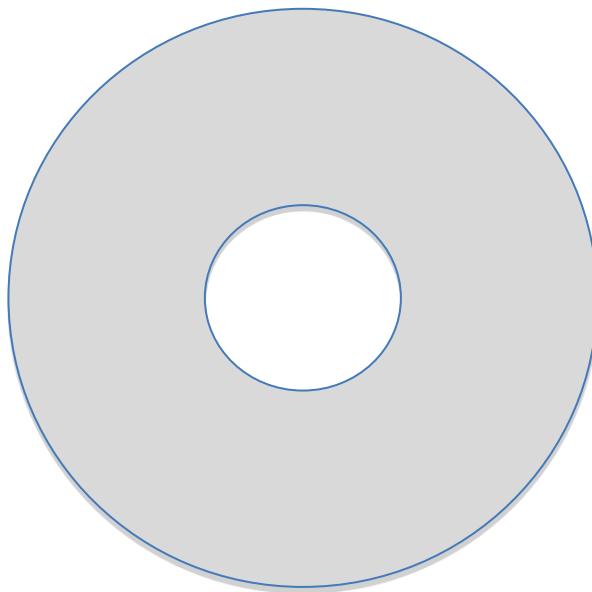
Decorate Mr. Perry's Donut



Decorate Mr. Perry's Donut



Decorate Mr. Perry's Donut

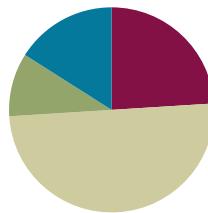


## Lesson 16

**Objective:** Count within tens by ones.

### 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)

- Hide Zero for Teen Numbers **K.NBT.1** (7 minutes)
- Count by Tens the Say Ten Way **K.CC.1** (2 minutes)
- Count with Ten-Frame Cards **K.CC.1** (3 minutes)

### Hide Zero for Teen Numbers (7 minutes)

Materials: (S) Hide Zero cards and interesting counters

Give each pair of students a set of Hide Zero cards. One partner gets 4 ones and the other partner gets 5 cards. The player with 5 puts his card down on the ten. The other partner counts out that many interesting counters (shells, rocks, pennies). They then reverse roles.

### Count by Tens the Say Ten Way (2 minutes)

Materials: (T) Rekenrek

- T: (Show 10 on the Rekenrek.) Say the number you see.  
 S: Ten.  
 T: (Show 2 tens on the Rekenrek.) Say the number the Say Ten way.  
 S: 2 tens.

Work towards 100 and back to zero, occasionally changing direction.



### A NOTE ON STANDARDS ALIGNMENT:

In this lesson, students write numbers through 100, which bridges Kindergarten content of writing numbers to 20 (**K.CC.3**) to Grade 1 content of writing numbers to 120 (**1.NBT.1**).

## Count with Ten-Frame Cards (3 minutes)

Materials: (S) Ten-frame cards

- T: Place a ten-frame card in front of you.
- S: (Students place ten-frame cards in front of them.)
- T: Say the number.
- S: Ten.
- T: Place another ten-frame card in front of you.
- S: (Students place a second ten-frame card in front of them.)
- T: Say the number the Say Ten way.
- S: 2 tens.

Continue with possible sequence: 3 tens, 4 tens, 5 tens, 6 tens, 7 tens, 8 tens, 9 tens, and 10 tens.

## Application Problem (5 minutes)

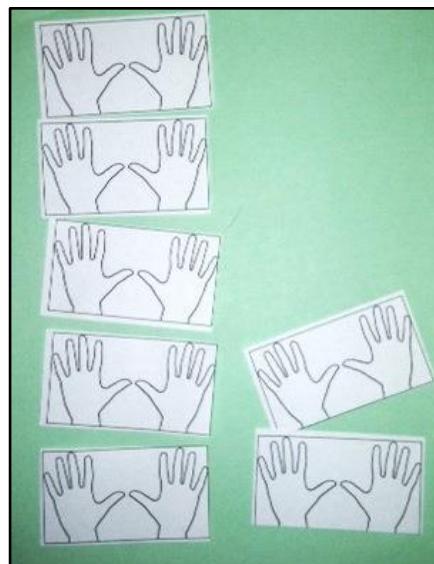
Materials: (S) Handprint cards

The students in Pre-Kindergarten are making handprints. 7 students are putting their handprints on a poster board. How many fingers will show in the poster? Use your handprint cards to help you find out.



**NOTES ON  
MULTIPLE MEANS OF  
ACTION AND  
EXPRESSION:**

Let students who are above grade level work independently or at a center in a small group. Give them many ten-frame cards since they may be able to go far beyond the rest of the class.

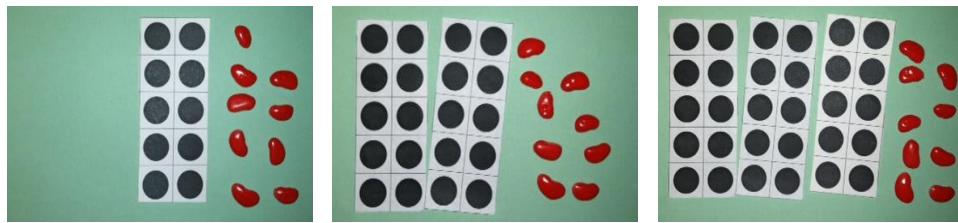


## Concept Development (25 minutes)

Materials: (T) 10 pieces of tagboard (S) Ten-frames and 9 counters

Demonstrate the following before having students do it with a partner:

Students count up from 0 to 9. When done, have them raise their hand to receive a ten-frame. They remove the nine counters the moment you give them the ten-frame. They then count from 10 to 19. Then hand them a new ten-frame as they remove the 9 counters and have them count from 20 to 29. Do not mention trading, regrouping. For now, just tell them that when they have counted to 29, or 39 or 49 or 59, etc ... to clear off all the ones and you will give them a new card of 10 ones. Show them how what they know about counting to 9 will help them count much bigger numbers! The Say Ten way really shows them that correlation.



**Group Activity:**

T: (Create a path by laying the pieces of tagboard across the floor like stepping stones. Have fun creating a story with the students about what's at the end of the path.) There's a magic pot at the end of this path, and if you can reach it you can wish for anything you want! But to get there you have to count in order from 30 to 39 or 40 to 49 or 50 to?

S: 59!

T: From 60 to?

S: 69!

T: Who would like to try to reach the magic pot? We'll help you count so you can get there.

T: (Choose a student, and then write 30 on the board.) Let's help Miles count, starting at 30.

S: (As student steps on each "stone.") 30, 31, 32, 33, 34, 35, 36, 37, 38, 39.

T: He made it! What did you wish for? (Allow a quick response.)

T: Who would like to go next?

T: (Choose another student, then write 50 on the board.)

T: Let's help Victoria get to the magic pot!

S: 50, 51, 52, 53, 54, 55, 56, 57, 58, 59.

T: Victoria made it to the pot! What did you wish for?

Give 2 to 3 students a chance to walk the path to the magic pot changing the start number each time to a larger number.

Students count chorally and get excited by counting to bigger numbers.

Afterwards, remove 5 stepping stones. Start counting to the magic pot from 35 to 39, 45 to 49, and 75 to 79. Next, put 2 more stepping stones back and start counting to the pot from 23, 53, 83, and 93. Again, only count up to the number with nines in the ones place. Students will be blurting out and wanting to say the multiple of ten but if they do, it means they can't get to the magic pot! This will create suspense and enhance students' desire to know those numbers, which will be reached in Lesson 18.

**Problem Set (5 minutes)**

Now that the students have worked with the numbers orally and with concrete materials, on the Problem Set, they model with mathematics, with the abstract number.

**MP.4** Students should do their personal best to complete the Problem Set within the allotted 5 minutes.

Note: This Problem Set asks students to write numbers greater than 20, which is a Grade 1 standard (**1.NBT.1**). If your students are not ready for this step, you might instead have them use numeral cards or simply tell the amount pictured.


**NOTES ON  
MULTIPLE MEANS OF  
REPRESENTATION:**

Support English language learners by alternating between Say Ten counting and regular counting. When the students are using their ten-frames and counters, have them whisper count. Puppets can help diffuse performance anxiety, too. One partner puts the counters while the other partner controls the puppet which counts.

## Student Debrief (8 minutes)

**Lesson Objective:** Count within tens by ones.

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, taking turns reading the numbers forward and back. 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.

- Look at the numbers in the first row on your Problem Set. What is the same about the numbers? What is different?
- Use the Rekenrek to practice more counting within a sequence. Possibly count from: 63 to 69, 72 to 79, 84 to 89.

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

Count up or down by 1s. Help the animals and the girl get what they want!

Count up.

|    |    |    |    |    |
|----|----|----|----|----|
| 63 | 64 | 65 | 66 | 67 |
|----|----|----|----|----|

Stop

Count down.

|    |    |    |    |
|----|----|----|----|
| 66 | 65 | 64 | 63 |
|----|----|----|----|

COMMON CORE Lesson #: \_\_\_\_\_ Date: \_\_\_\_\_ Lesson Name EXACTLY 1/20/13

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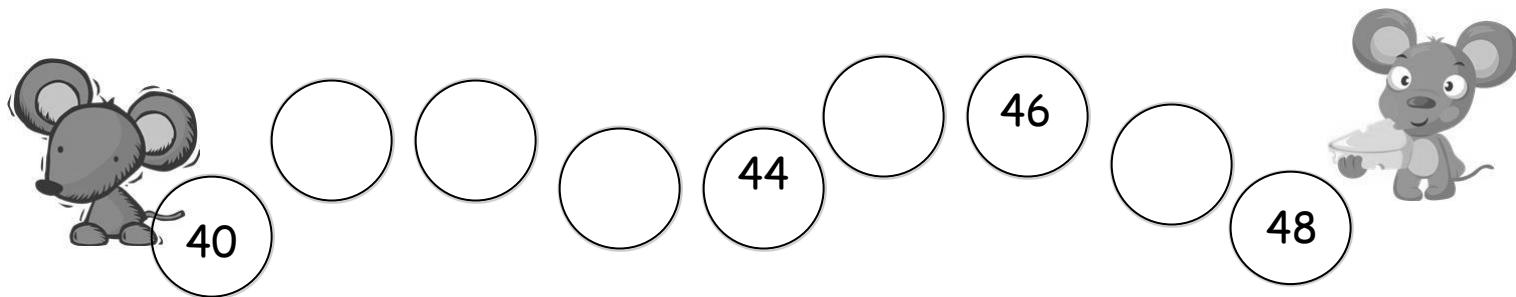
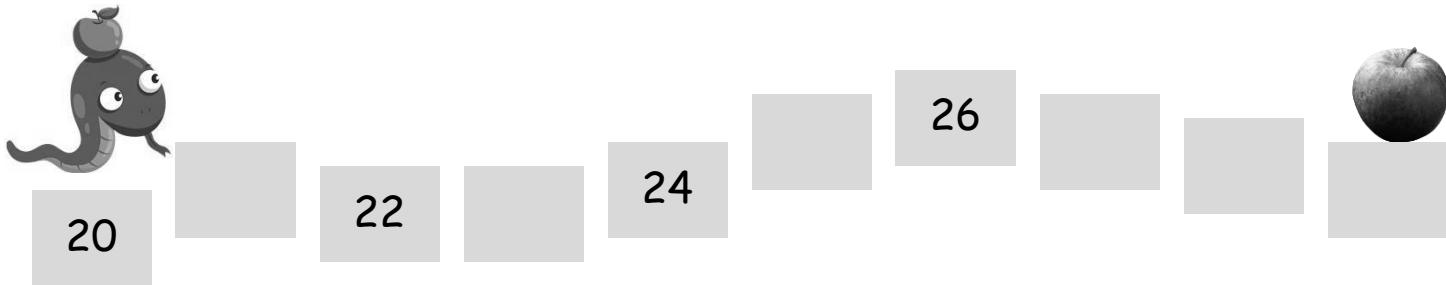
## Exit Ticket (3 minutes)

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.

Name \_\_\_\_\_

Date \_\_\_\_\_

Count up or down by 1s. Help the animals and the girl get what they want!



Count up.

|    |    |  |  |  |  |    |  |  |  |
|----|----|--|--|--|--|----|--|--|--|
| 63 | 64 |  |  |  |  | 66 |  |  |  |
|----|----|--|--|--|--|----|--|--|--|



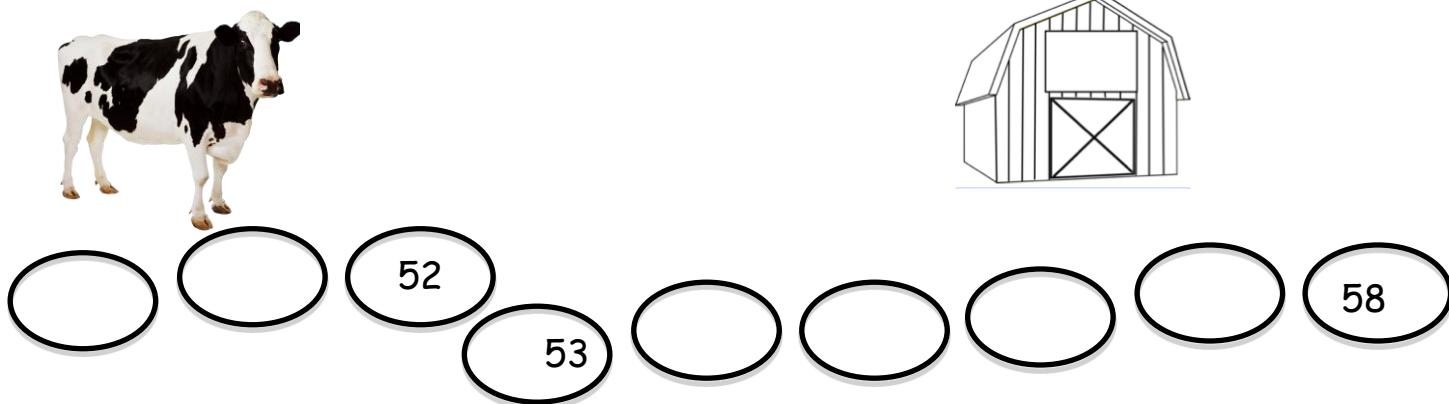
Count down.



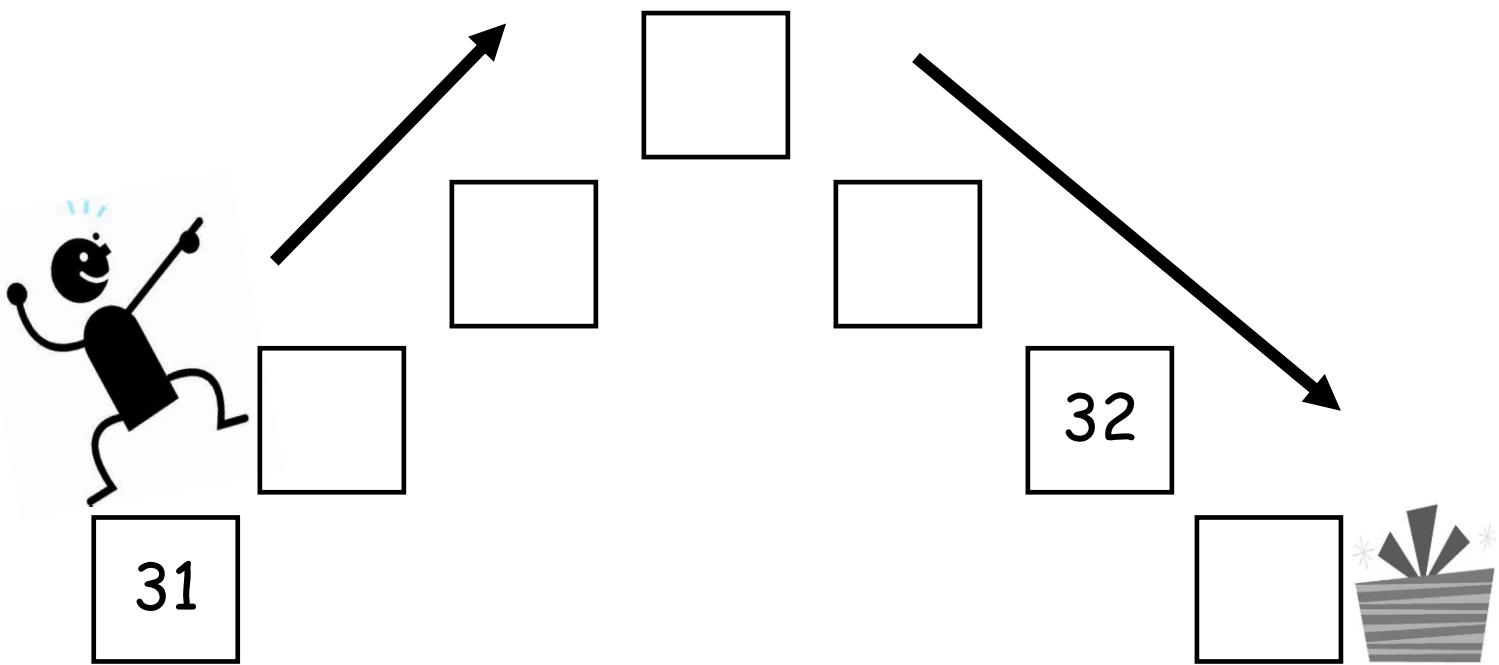
Name \_\_\_\_\_

Date \_\_\_\_\_

1. Help the cow get to the barn by counting by 1s.



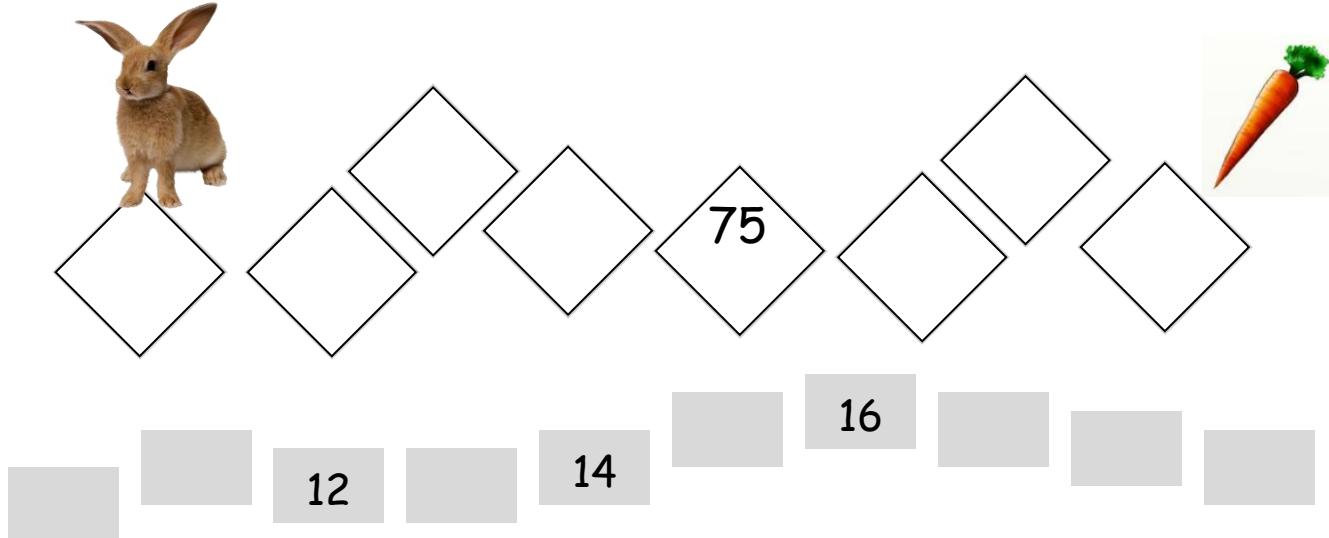
2. Help the boy get to his present. Count up by 1s. When you get to the top, count down by 1s.



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Help the rabbit get his carrot. Count by 1s.



71

2. Count up by 1s then down by 1s.

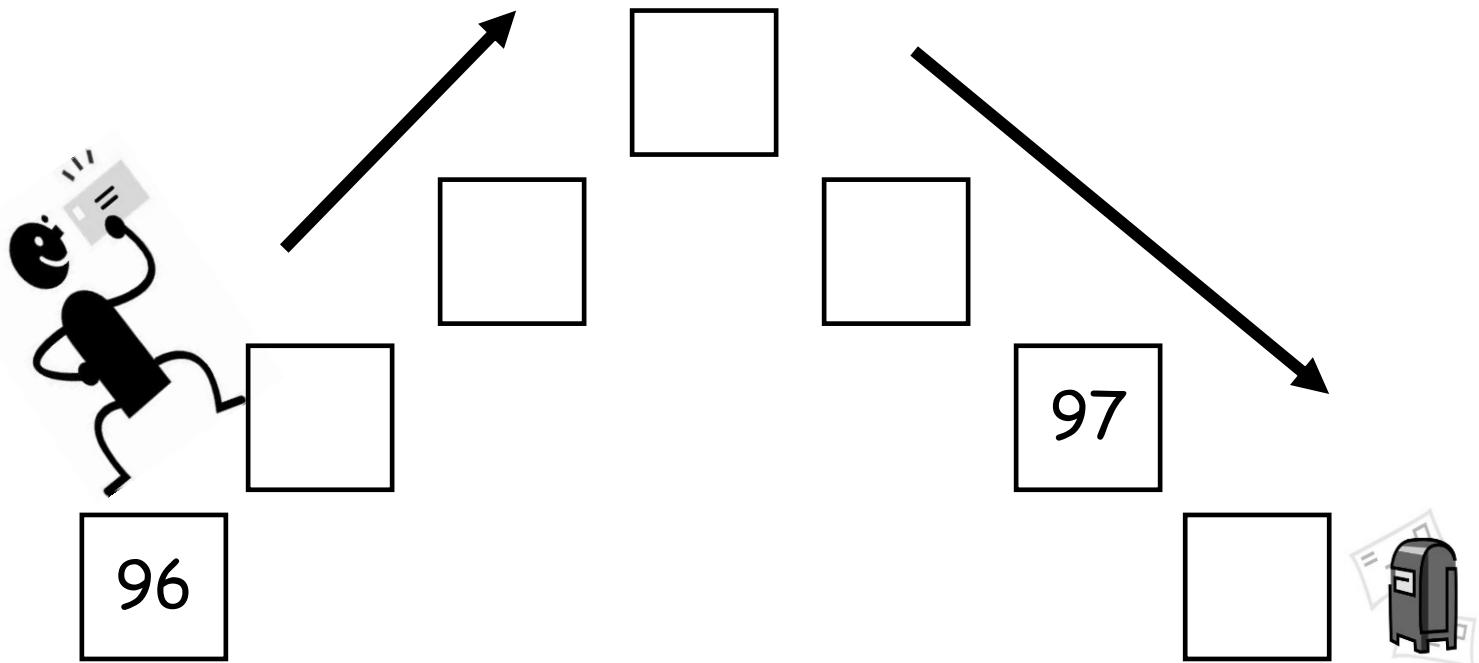
A 7x5 grid of squares. The top-right square contains the number 89. The bottom-left square contains the number 84. A large black arrow points upwards along the left edge of the grid. A large black arrow points downwards along the right edge of the grid.

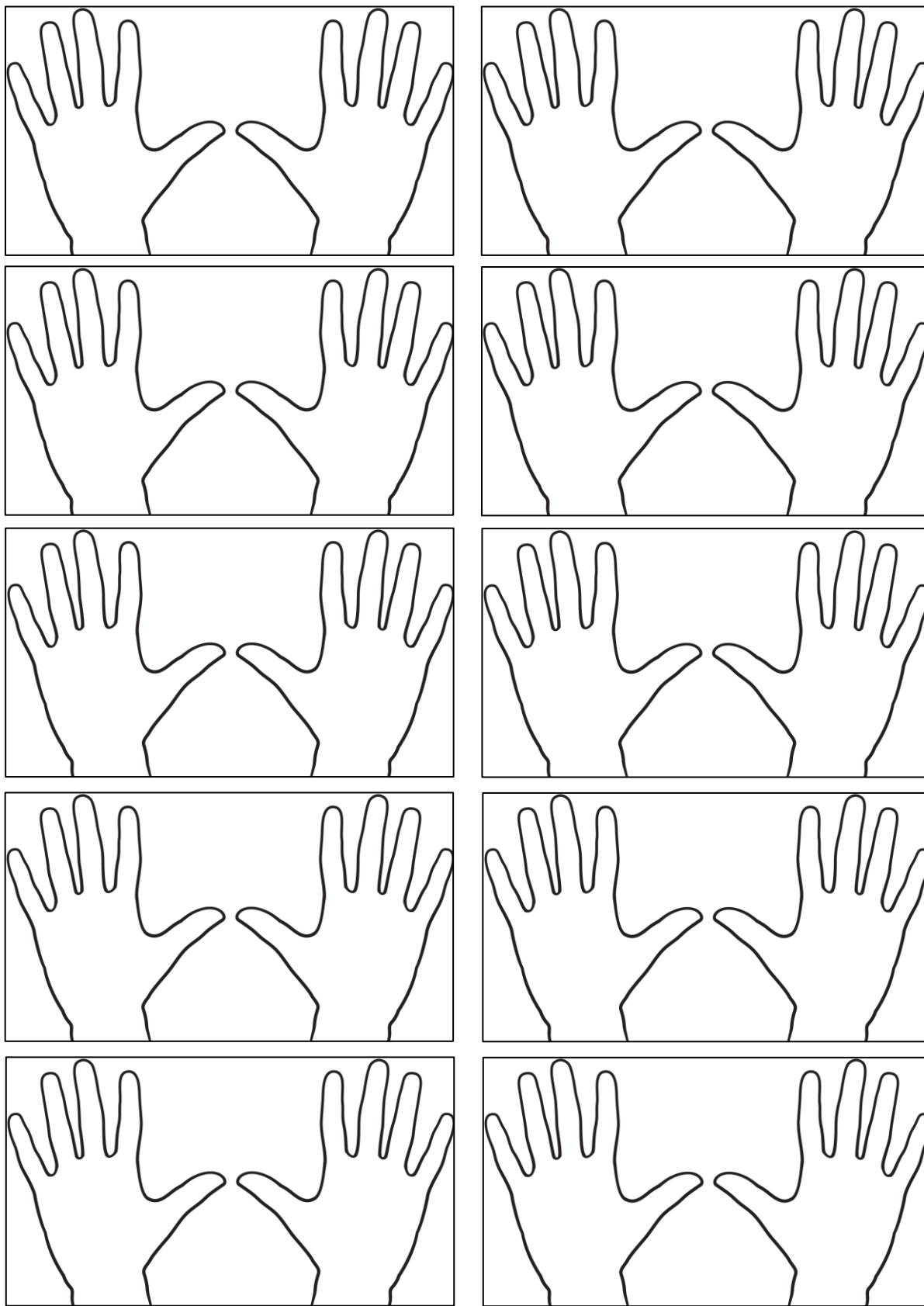
|  |  |    |    |  |
|--|--|----|----|--|
|  |  |    | 89 |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  | 84 |    |  |

A 7x5 grid of squares. The top-right square contains the number 35. The bottom-left square contains the number 30. A large black arrow points upwards along the left edge of the grid. A large black arrow points downwards along the right edge of the grid.

|  |  |    |    |  |
|--|--|----|----|--|
|  |  |    | 35 |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  |    |    |  |
|  |  | 30 |    |  |

3. Help the boy mail his letter. Count up by 1s. When you get to the top, count down by 1s.



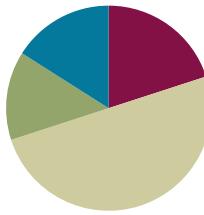


## Lesson 17

**Objective:** Count across tens when counting by ones through 40.

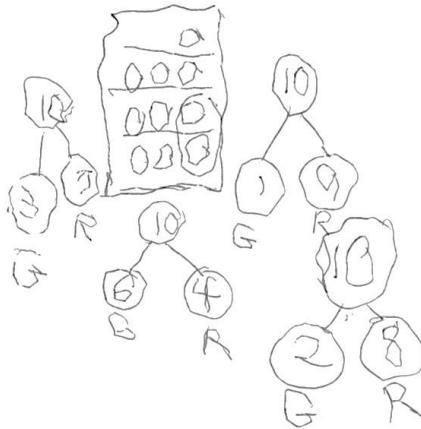
### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Application Problem | (7 minutes)         |
| Fluency Practice    | (10 minutes)        |
| Concept Development | (25 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Application Problem (7 minutes)

Sammy's mom has 10 apples in a bag. Some are red and some are green. What might be the number of each color apple in her bag? There is more than one possible answer. Show your answers with number bonds. Label the parts as R and G.



### A NOTE ON STANDARDS ALIGNMENT:

In this lesson, students write numbers through 100, which bridges Kindergarten content of writing numbers to 20 (**K.CC.3**) to Grade 1 content of writing numbers to 120 (**1.NBT.1**).



### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Challenge students who are above grade level to model all nine possible solutions for the Application Problem and to explain both orally and in writing how all nine possibilities are a response to the same problem.

Note: In this lesson, the Application Problem precedes the Fluency Practice because the fluency work leads directly into the counting of the lesson.

### Fluency Practice (10 minutes)

- 5-Frame Flashes **K.OA.5** (4 minutes)
- Count Out Teen Numbers **K.CC.1** (4 minutes)
- Count within Tens **K.CC.1** (2 minutes)

## 5-Frame Flashes (4 minutes)

Materials: (T) Large 5-Frame cards

- T: (Show 4 dots.) How many dots do you see?
- S: 4.
- T: How many more to make 5?
- S: 1.
- T: Say the addition sentence.
- S:  $4 + 1 = 5$ .

Continue with the following possible sequence: 1, 3, 2, 5, 0, 4, 2.



### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

5-Frame Flashes foster English language learners' number sense and ability to speak about math in English. Review number words by counting the dots, if necessary. Tailor the sequence according to the students' needs and repeating flashes when necessary.

## Count Out Teen Numbers (4 minutes)

Materials: (S) 1 bag of about 20 objects per pair of students, personal white boards

**MP.2**

- T: Count 13 items out of your bag.
- T: Separate them into two parts—one part with 10 and another part. Write the number on your personal white board.

Repeat this process for four or five other amounts.

## Count within Tens (2 minutes)

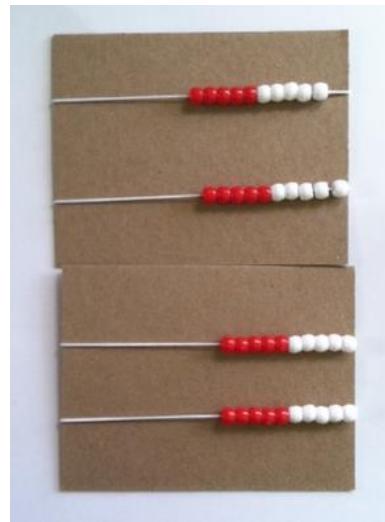
- T: Let's count starting at 20.

Guide the students, counting from 20 to 29, occasionally changing directions. Repeat for 50–59 and 80–89.

## Concept Development (25 minutes)

Materials: (S) 1 personal Rekenrek and ten ten-frames per student

- T: Put your Rekenrek together with your partner's.
- T: Move all your beads to the right hand side.
- T: Count your beads by ones. Partner A move the first row. Both of you whisper each number as you move your beads from right to left.
- S: (Moving beads with partner.) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.
- T: Say the number.
- S: 10.
- T: Partner B moves the beads of the second row one at a time. What is the first number we will say?



- S: Ten one.
- T: How do we say the number the regular way?
- S: 11.
- T: Count the second row starting with eleven. Move your beads one at a time and whisper the numbers.
- S: (Moving the beads.) 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.
- T: What is the number the Say Ten way?
- S: 2 tens.
- T: Now it's Partner A's turn. Move one bead on the next row. What is the number the Say Ten way?
- S: 2 tens one.
- T: Say it the regular way.
- S: 21.
- T: Keep counting the regular way.
- S: (Placing counters up to 30.) 22, 23, 24, 25, 26, 27, 28, 29, 30.
- T: What is the number the Say Ten way?
- S: 3 tens.

Continue to 40 in this manner. Then ask students to count to 40 on their own with their partner. To add excitement to this exercise, they can speak the last bead of each row loudly.

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Note: In this Problem Set, students write numbers to 100 which bridges to the Grade 1 standard, **(1.NBT.1)**. The Kindergarten standard requires students to write numbers only to 20.

### Student Debrief (8 minutes)

**Lesson Objective:** Count across tens when counting by ones through 40.

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

#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Counting with the Rekenrek is great for below grade level students who will benefit from practicing one-to-one correspondence, support of a peer, and the lesson's frequent checks for understanding. To avoid miscounting, encourage counting without haste through song or rhythm.

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

Touch and count the dots from left to right starting at the arrow. Count to the puppy, and then keep counting to his bones and twin brother!

Count again and color the last dot of each row green. When you have finished, go back and see if you can remember your green numbers!

What number did you say when you touched the puppy?

- The first bone?
- The second bone?
- His twin brother?

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, taking turns reading the numbers forward and back. 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.

- Touch and count each series of numbers, pointing out that they read from left to right as they do when reading.
- Read each series of numbers in a different voice, e.g., like an elf, like a giant, like a witch, as a crescendo, etc. Adding drama makes the learning memorable and fun!
- Count across ten from various starting points using the Rekenrek.

Count up by 1s.

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 17 | 18 | 19 | 20 | 21 | 22 |
|----|----|----|----|----|----|

Count up by 1s. Help the cow eat the grass!

|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|----|----|----|----|----|----|----|

Count up by 1s. Help the kitty play with her yarn!

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|----|----|----|----|----|----|----|----|----|----|

Count down by 1s.

|    |    |   |
|----|----|---|
| 11 | 10 | 9 |
|----|----|---|

|    |    |    |
|----|----|----|
| 21 | 20 | 19 |
|----|----|----|

|    |    |
|----|----|
| 31 | 30 |
|----|----|

COMMON CORE | Lesson #: \_\_\_\_\_  
Lesson Name EXACTLY GK-M5-TD-118.docx  
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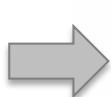
### Exit Ticket (3 minutes)

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.

Name \_\_\_\_\_

Date \_\_\_\_\_

Touch and count the dots from left to right starting at the arrow. Count to the puppy, and then keep counting to his bones and twin brother!

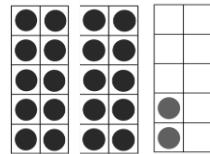
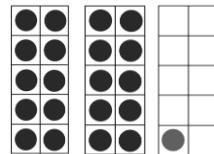
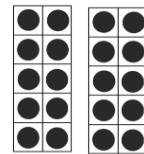
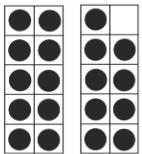
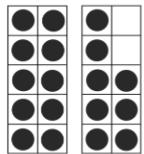
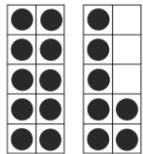


Count again and color the last dot of each row green. When you have finished, go back and see if you can remember your green numbers!

What number did you say when you touched the first puppy?

- The first bone?
- The second bone?
- His twin brother?

Count each number by 1s. Write the number below when there is a box.








Touch and count the rocks from the cow to the grass!



Count up by 1s. Help the kitty play with her yarn!



31

32

36



Count down by 1s.

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

Touch and count carefully. Cross out the mistake, and write the correct number.

Example:

~~1, 2, 9, 4, 5~~

3

|   |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|
|  | 20 | 21 | 22 | 23 | 24 | 25 | 29 |
|---|----|----|----|----|----|----|----|

|  |    |    |    |    |    |    |    |
|--|----|----|----|----|----|----|----|
|  | 30 | 31 | 32 | 33 | 43 | 35 | 36 |
|--|----|----|----|----|----|----|----|

|   |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|
|  | 25 | 26 | 27 | 28 | 29 | 29 | 31 |
|---|----|----|----|----|----|----|----|

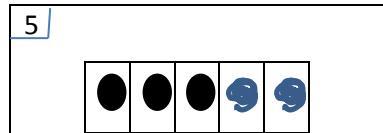
|   |    |    |    |    |    |    |    |
|---|----|----|----|----|----|----|----|
|  | 34 | 35 | 36 | 37 | 38 | 39 | 44 |
|---|----|----|----|----|----|----|----|

Name \_\_\_\_\_

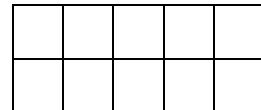
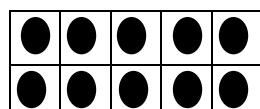
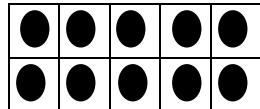
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Draw more to show the number.

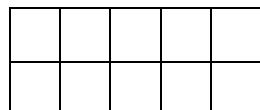
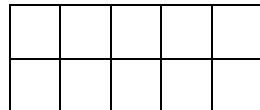
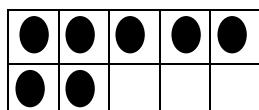
Example:



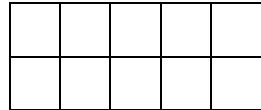
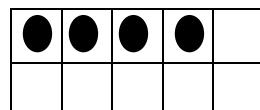
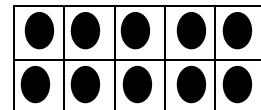
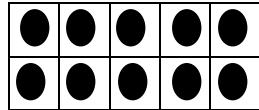
23



27



34



38



40

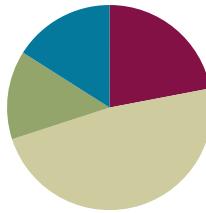


## Lesson 18

**Objective:** Count across tens by ones to 100 with and without objects.

### Suggested Lesson Structure

|                      |                     |
|----------------------|---------------------|
| Application Problems | (7 minutes)         |
| Fluency Practice     | (11 minutes)        |
| Concept Development  | (24 minutes)        |
| Student Debrief      | (8 minutes)         |
| <b>Total Time</b>    | <b>(50 minutes)</b> |



### A NOTE ON STANDARDS ALIGNMENT:

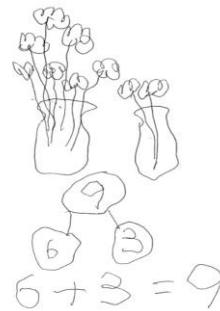
In this lesson, students write numbers through 100 which bridges Kindergarten content of writing numbers to 20 (**K.CC.3**) to Grade 1 content of writing numbers to 120 (**1.NBT.1**).

### Application Problem (7 minutes)

Susan is putting 9 flowers in 2 vases. Draw a picture to show a way she might do that. Make a number bond and a number sentence to match your idea. (Bonus: See if you can think of another way to put the flowers in the vases.)

When students have finished, have them compare their work with another student. Is their way of showing the flowers the same? Why or why not? How is the flower problem similar to the apple problem from yesterday?

Note: In this lesson, the application problem precedes the fluency because the fluency work leads directly into the counting of the lesson.



### Fluency Practice (11 minutes)

- Ten-Frame Flashes **K.CC.2** (3 minutes)
- Teen Number Bonds **K.CC.1** (4 minutes)
- Count on the Rekenrek **K.CC.4** (4 minutes)

### Ten-Frame Flashes (3 minutes)

Materials: (T) Ten-frame cards

T: (Show 9 dots.) How many dots do you see?

S: 9.

T: How many more does 9 need to be 10?

S: 1.

Continue with the following possible sequence: 1, 5, 8, 2, 3, 7 6, 1, 4, 3, 5, 2, 9.

## Teen Number Bonds (4 minutes)

Materials: (S) Image of blank number bond

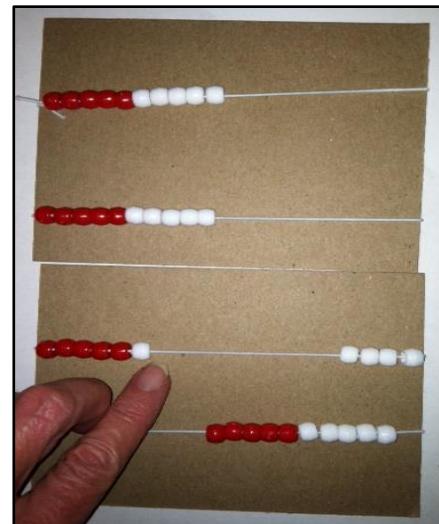
- T: (Project number bond with parts of 10 objects and 6 objects.) Count the biggest part.
- S: 10.
- T: Say the smaller part.
- MP.4** S: 6.
- T: Count the whole or total with me.
- S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

Continue with the following possible sequence: 10 and 7, 10 and 3, 10 and 1, 10 and 8, 10 and 4.

## Count on the Rekenrek (4 minutes)

Materials: (S) Personal Rekenrek

- T: Whisper count with your partner up to 40 on your Rekenrek.  
Buzz before you say the first number of each row.



## Concept Development (24 minutes)

Materials: (S) Set of 9 full ten-frame cards, 2 empty ten-frame cards, 20 counters per student, and Rekenrek

- T: (Count by ten to 40 by sliding four rows on the Rekenrek.) Count with me.
- S: 10, 20, 30, 40.
- T: Now count by ones. (Slide one bead at a time as they count.)
- S: 41, 42, 43, 44, 45, 46, 47, 48, 49, 50.
- T: What is the number the Say Ten way?
- S: 5 tens.
- T: (Slide one more bead.) Tell me the number the Say Ten way.
- S: 5 tens one.
- T: Tell me the number the regular way.
- S: 51.
- T: (Slide the bead back so that only 50 beads are showing.) How many now?
- S: 50.



### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Use your English language learning students' culture to teach them the names of the numbers. For instance, couple "twenty" with "veinte", and "thirty" with "treinta" for your native Spanish speakers. Build on the students' culture and language as you teach will help your native English speakers as well by expanding their horizon and exposing them to other cultures and languages.

- T: (Slide one bead back so that 49 are showing.) How many, the Say Ten way?  
 S: 4 tens nine.  
 T: How many, the regular way?  
 S: 49.

Repeat this process from different starting points within 100, going back and forth across the ten.

- T: Now let's show and count numbers a different way.  
 Lay out ten-frame cards as we count the Say Ten way.  
 S: (Slowly counting as students lay out the cards.) Ten, 2 tens, 3 tens, 4 tens, 5 tens.  
 T: Now let's count the regular way by tens. Touch each card as we count it.  
 S: 10, 20, 30, 40, 50.  
 T: Place the two empty ten-frames down after 50.  
 T: Count on from 50, placing one counter at a time as we say each number. Let's start the Say Ten way.  
 S: (Placing a counter each time they count.) 5 tens one, 5 tens two, 5 tens three ... 6 tens.  
 T: Now let's count that the regular way, starting at 50. Touch each counter as you count.  
 S: 50, 51, 52, 53, ... 60.  
 T: Place one more counter on the next ten-frame. Say the number the Say Ten way.  
 S: 6 tens 1.  
 T: What is the number the regular way?  
 S: 61.  
 T: What is one more than 60?  
 S: 61.  
 T: Take one counter off. What is the number the Say Ten way?  
 S: 6 tens.  
 T: What is the number the regular way?  
 S: 60.  
 T: Take away one more counter. What is the number the Say Ten way?  
 S: 5 tens nine.  
 T: Say the number the regular way.  
 S: 59.

Repeat this process starting from different numbers within 100, focusing on crossing over to the next ten and then back (e.g., 69, 70, 71, 70, 69).



### NOTES ON

### MULTIPLE MEANS OF ENGAGEMENT:

Challenge above grade level students by provide them with opportunities to extend the lesson. For instance, after counting by ones, have students skip count from 28 by twos, by threes, and by fives, using the Rekenrek on their own. For very advanced students, ask them to write their answers before you move the beads to encourage their counting in their heads rather than relying on the visual support!

## Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Note: Do not show the students the directions paper included in the materials for the lesson and pictured above to the right. It would give away the “answers.” This page is for use by the teacher during the Problem Set facilitation and possibly for use in the debrief.

Have the students continue the patterns to the larger numbers, identifying the number for each triangle, box, and green circle.

## Student Debrief (8 minutes)

**Lesson Objective:** Count across tens by ones to 100 with and without objects.

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, taking turns reading the numbers forward and back. 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.

- What is one more than 19? What is one more than 29?
- Count from 79 to 90. From 61 to 71.
- Who can come up and show one more than 30 on the Rekenrek? One more than 80?
- What did you get better at (learn, understand, do better) today?

## 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.

### Teachers' Directions for the Rekenrek Activity Worksheet.

Have students show 50 dots by using their hiding paper to cover the other rows.



Have students whisper count all the dots. Say the last number in each row loudly and color the circle green.



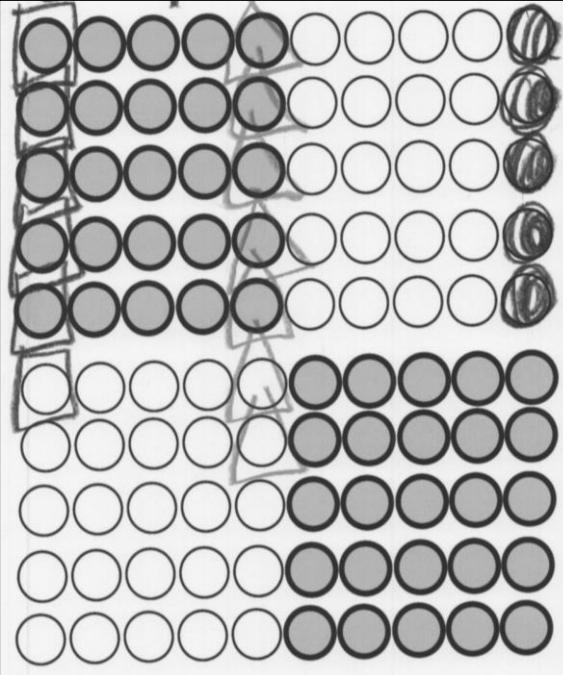
Have students show 60 dots using their hiding paper to cover 4 rows. Have them whisper count all the dots. Have them box the first dot in each row with blue and say its number loudly.



Have students show 70 dots by hiding 30 dots.

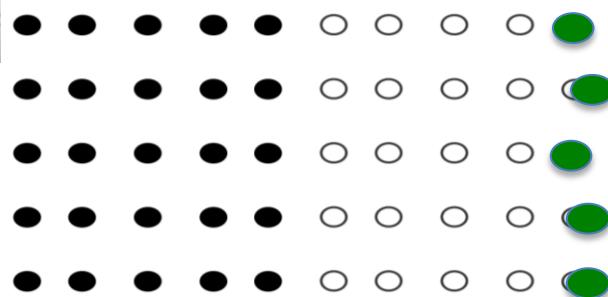


Have them whisper count all the dots. Have them put a triangle around the fifth dot in each row with red and say those numbers loudly.



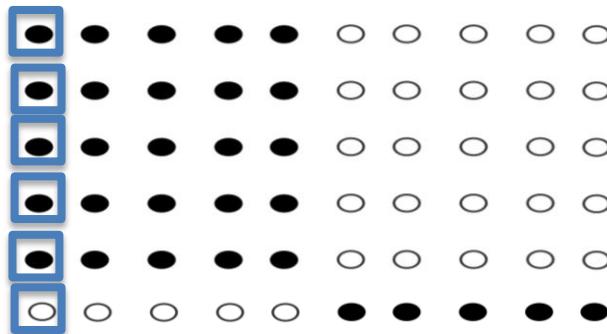
## Teachers' Directions for the Rekenrek Problem Set.

Have students show 50 dots by using their hiding paper to cover the other rows.



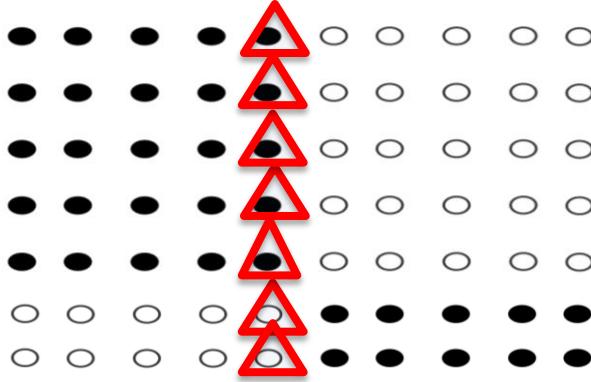
Then have students whisper count all the dots. Say the last number in each row loudly and color the circle green.

Have students show 60 dots using their hiding paper to cover 4 rows.



Then have students whisper count all the dots. Have them box the first dot in each row with blue and say its number loudly.

Have students show 70 dots by hiding 30 dots.

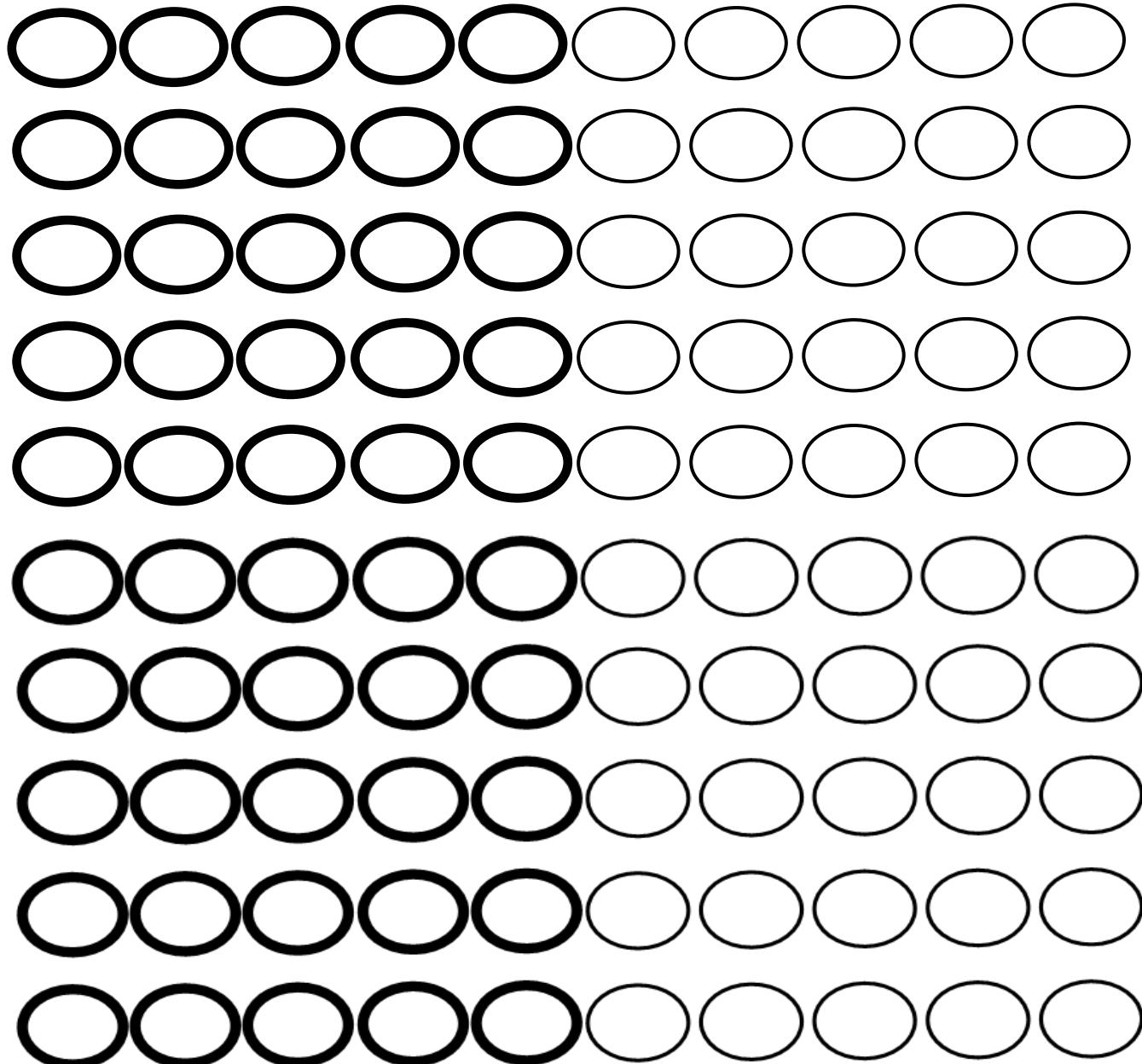


Then have students whisper count all the dots. Have them put a triangle around the fifth dot in each row with red and say those numbers loudly.

Name \_\_\_\_\_

Date \_\_\_\_\_

Touch and whisper count the circles by 1s to 100. Say the last number in each row loudly and color it purple. Do your best. Your teacher may call time before you are finished.



Name \_\_\_\_\_

Date \_\_\_\_\_

Use your Rekenrek (attached), hiding paper (an extra paper to hide some of the dots), and crayons to complete each step listed below. Read and complete the problems with the help of an adult.

1. Hide to show just 40 on your abacus paper. Touch and count the circles until you say 28. Color 28 green.

- Touch and count each circle from 28 to 34.
  - Color 34 (the 34<sup>th</sup> circle) with a red crayon.
- 

2. Hide to show just 60 on your abacus paper. Touch and count the circles until you say 45. Color 45 yellow.

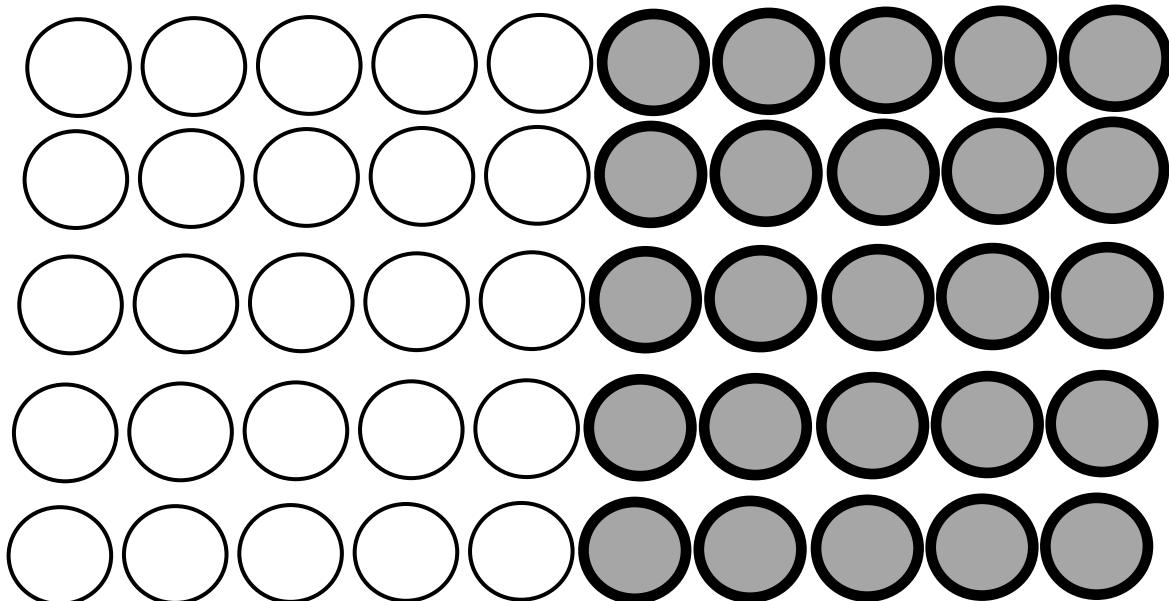
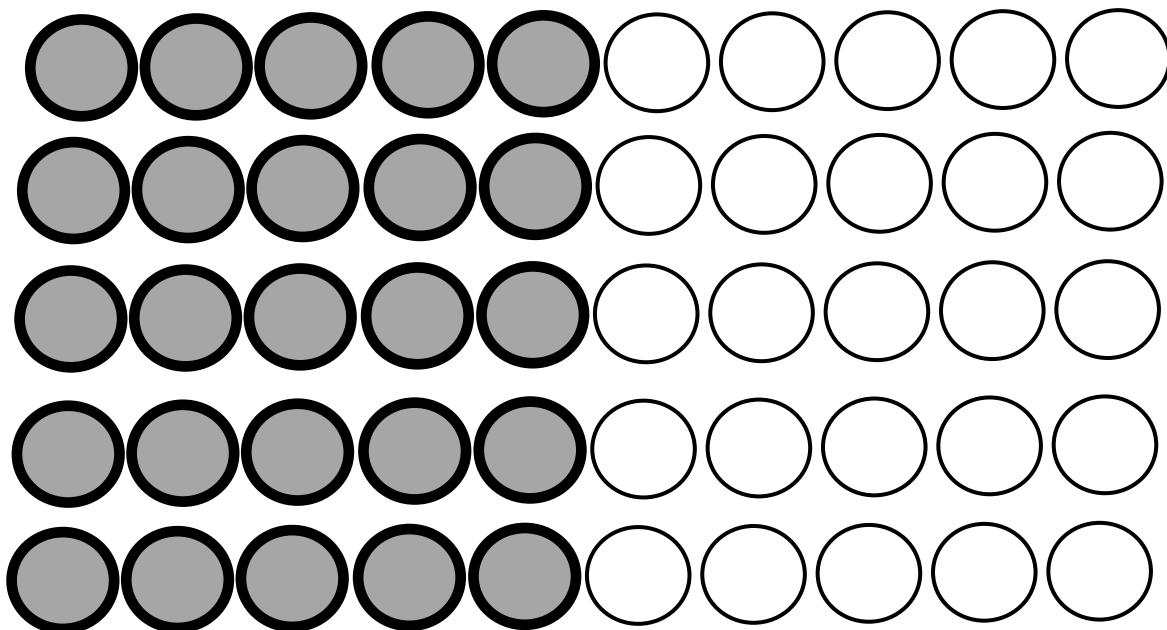
- Touch and count each circle from 45 to 52.
  - Color 52 with a blue crayon.
- 

3. Hide to show just 90 on your abacus paper. Touch and count the circles until you say 83. Color 83 purple.

- Touch and count down from 83 to 77.
  - Color 77 with a red crayon.
- 

4. Show 100.

- Touch and count starting at 1.
- Say the last number in each row loudly and make it black.

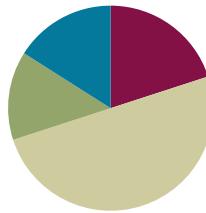
Rekenrek

## Lesson 19

### Objective: Explore numbers on the Rekenrek. (Optional.)

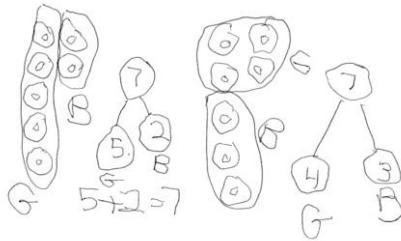
#### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Application Problem | (7 minutes)         |
| Fluency Practice    | (10 minutes)        |
| Concept Development | (25 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



#### Application Problem (7 minutes)

The light is out, and it's dark. Peter knows that he left 7 blue and green beads for his crafts on his desk. But he can't see how many are blue or how many are green in the dark! Draw a picture to show what the colors of his beads might be when he turns on the light.



When students have finished, have them compare their work with another student. Is their way of showing the beads the same? Why or why not? How is this problem like our problems in previous lessons with the flowers and the apples?

Note: In this lesson, the application problem precedes the fluency because the fluency work leads directly into the counting of the lesson.

#### Fluency Practice (10 minutes)

- Number Bonds of 7 **K.OA.3** (3 minutes)
- Count to 100 by Ones **K.CC.1** (3 minutes)
- Hide Zero for Numbers to 100 **K.CC.1** (4 minutes)

#### A NOTE ON STANDARDS ALIGNMENT:

In this lesson, students explore decomposing numbers to 100. To begin, they simply decompose numbers to 10 and see the relevance of that to teen numbers. Next, they sit with a partner and decompose numbers to 40 as tens and ones (**1.NBT.2**). They then represent numbers on two Rekenreks with a friend and realize that there is a teen number hiding inside this larger number by pulling apart their two Rekenreks! The exploration is meant to be playful, generating excitement about decomposing numbers.

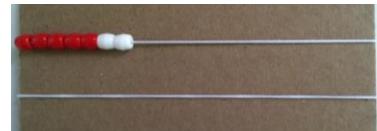
#### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Teach English language learners to ask questions such as “my solution is different than yours because I...” in order to extend partner shares. Model asking different types of questions and have students practice until they feel confident to try with a partner.

**Number Bonds of 7 (3 minutes)**

Materials: (S) Personal Rekenreks

- T: Show ten beads only (students push a row of ten behind).  
 T: Hide 3 white beads behind your board.  
 T: The total number of beads you see is?  
 S: 7.  
 T: Push over 1 bead to the right to make 2 parts. Tell your partner the number bond. Part \_\_\_, part \_\_\_, total 7.  
 S: Part 6, part 1, total 7



Continue one bead at a time stating the related bond. Keep the Rekenreks at 7 for the main lesson.

**Count to 100 by Ones (3 minutes)**

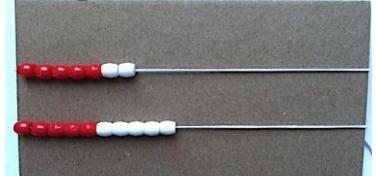
Materials: (S) Rekenrek Dot Paper

Students count to 100 (or as high as they can in 3 minutes) by touching the beads on the Rekenrek dot paper. Have them say “buzz” after the last number of each row.

**Hide Zero for Numbers to 100 (4 minutes)**

Materials: (T) Hide Zero cards

- T: (Hold 30 card and 7 card so they show 37.) Say the number.  
 S: 37.  
 T: Say the number the Say Ten way.  
 S: 3 ten seven.  
 T: (Break apart the cards into 30 and 7.)



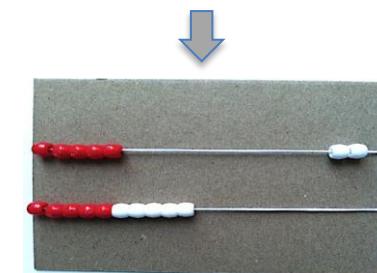
Repeat process for four or five other numbers between 20 and 100.

**Concept Development (25 minutes)**

Materials: (S) Personal Rekenreks

**Exploration 1**

- T: Show me 7 again on your Rekenrek.  
 T: Take the bottom ten beads of your Rekenrek out of hiding. Push them over to the left under your 7.  
 T: How many beads are on the left?



- S: Seventeen.
- T: Today, let's work the Say Ten way.
- S: Ten seven.
- T: Move 1 bead from your 7 over to the right like we did in our fluency.
- T: Total 16. The two parts are?
- S: 10 and 6.
- T: Move another bead. Total 15, the parts are?
- S: 10 and 5.
- T: Move another!
- S: Total 14, the parts are 10 and 4.
- T: Keep going! (Give the students a moment to work through the teen numbers.)

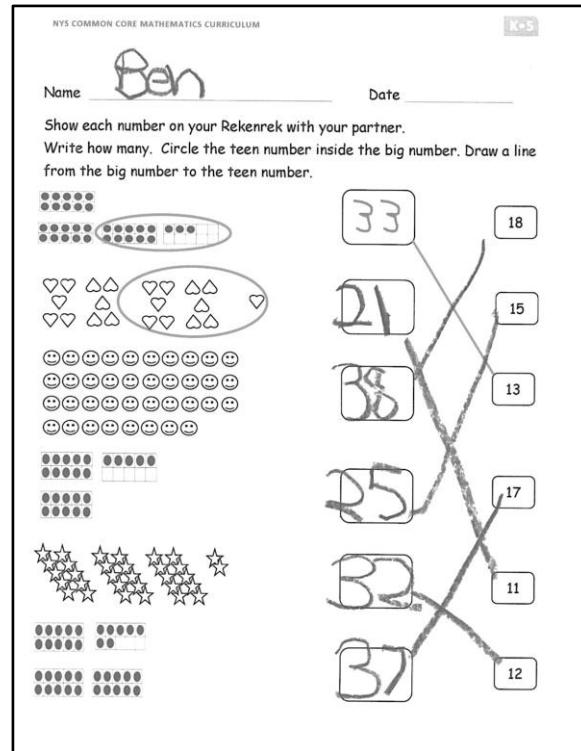
### Exploration 2

- T: Now sit with a partner. Partner B, take all your beads out of hiding and put your Rekenrek under your partners'. Partner A, show ten seven again.
- T: How many beads do you have on the left now? Tell me the Say Ten way.
- S: 3 ten seven.
- T: Move 1 bead from the 7 to the right. How many beads are on the left?
- S: 3 ten 6.
- T: Move a bead.
- S: 3 ten 5.
- T: Move a bead.
- S: 3 ten 4.

Have the students work with base numbers other than 7 within the twenties and thirties. Then three students can sit together and work with numbers within the forties and sixties. The decomposition of the larger numbers is **1.NBT.2**, “Understanding Place Value.” This playful work lets students get a foretaste of these important understandings that the decomposition of the numbers 1–9 and the teens give. Avoid part/whole language in Exploration 2 and in the Problem Set. Simply let the students’ natural knowledge see the connection between the “base number,” the teens, and the larger numbers.

### Problem Set (7 minutes)

Before doing the Problem Set, guide the students to see that they can also separate out the teen numbers when working with their partner.



T: Where is our teen number? It is in Partner A's Rekenrek! While the top row shows 7, the top Rekenrek shows 17. The teen numbers are hiding inside bigger numbers just like 7 was inside 17. Pretend you are breaking the number, pulling hard at the Rekenreks to break that number apart.

This is of course beyond the grade level standard (**1.NBT.2**), but it illustrates the idea that we can break numbers into parts—the Rekenreks make it so easy to show that! Keep it playful.

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

### Student Debrief (8 minutes)

**Lesson Objective:** Explore numbers on the Rekenrek. (Optional.)

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, taking turns reading the numbers forward and back. 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.

Always have students check their work 1–9 with a partner once they bring it to the carpet.

Guide students to see that their work with the first row of numbers, 1 to 10, helps them work with bigger numbers, too, just like when they count from 1 to 9 it helps them to count all the way to 100.

- What did your number bonds of numbers to 9 help you to see about your number bonds of teen numbers?
- When you make a teen number in parts, what do you notice? Which is always biggest, the parts or the total, the whole?
- What happens if the top row on your Rekenrek is a part? What is the other part?
- What else could be a part of a bigger number?
- When you circled teen numbers on the Problem Set, you were finding a part. What part did you find in the first problem?
- How does finding parts help you to understand big numbers better?

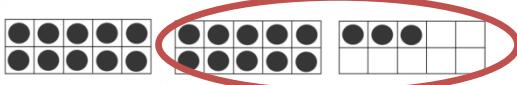
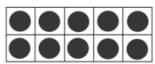
### Exit Ticket (3 minutes)

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.

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

**Find the Hidden Teen Number**

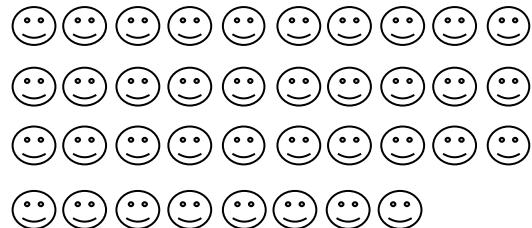
Show each number on your Rekenrek with your partner. Write how many. Circle the teen number inside the big number. Draw a line from the big number to the teen number that hides inside it.


**33**

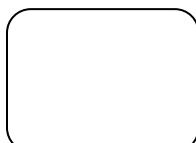
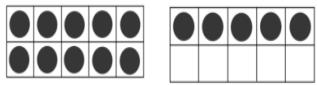
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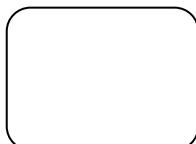
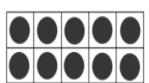
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13



17



11



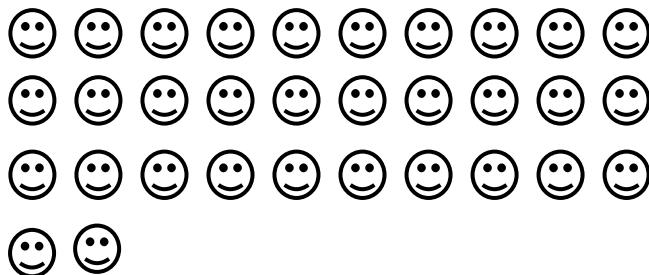
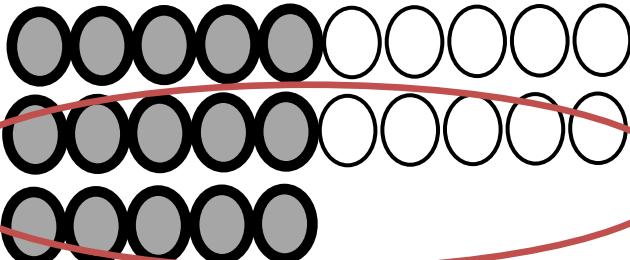
12



Name \_\_\_\_\_

Date \_\_\_\_\_

Show the number on your Rekenrek with your partner. Write the number of objects that matches the number in the box. Circle the teen number you see. Write the teen number in the other box.



Name \_\_\_\_\_

Date \_\_\_\_\_

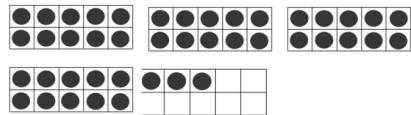
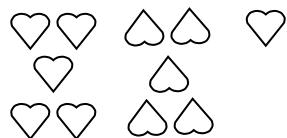


**25**

**26**

Write the number you see. Now draw one more, then write the new number.

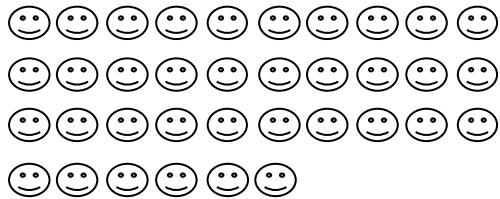


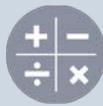













## Topic E

# Represent and Apply Compositions and Decompositions Teen Numbers

**K.CC.5, K.NBT.1, K.CC.1, K.CC.2, K.CC.3, K.CC.4c, K.CC.6, 1.OA.8, 1.NBT.3**

|                               |                       |   |
|-------------------------------|-----------------------|---|
| <b>Focus Standard:</b>        | K.CC.5<br><br>K.NBT.1 | Count to answer “how many?” questions, about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many ten things in a scattered configuration; given a number from 1 – 20, count out that many objects.<br><br>Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. |
| <b>Instructional Days:</b>    | 5                     |   |
| <b>Coherence -Links from:</b> | GPK–M5                | Write Numerals to 5, Addition and Subtraction Stories, Count to 20  |
| <b>-Links to:</b>             | G1–M2                 | Place Value, Comparison, Addition and Subtraction of Numbers to 20  |

Topic E’s Lesson 1 begins as students represent teen number decompositions and compositions by writing addition sentences. In Lesson 2, students make bonds with materials and hide one of the parts for their partner who must figure out what the hidden part is. The number bond with a hidden part is represented by the teacher as an addition equation with a missing addend, the hidden part (aligns to **1.OA.8**). In Lesson 3, students compare teen numbers by counting and comparing the extra ones. For example, students decompose 12 into 10 and 2, and 16 into 10 and 6. They compare 2 ones and 6 ones to see that 16 is more than 12 using the structure of the 10 ones (**MP.7**). This is an application of the Kindergarten comparison standards (**K.CC.6**, **K.CC.7**), which move into the Grade 1 comparison standard (**1.NBT.3**).

In Lesson 23, students reason about situations to determine if they are decomposing a teen number as 10 ones and some ones, or composing 10 ones and some ones to *find* a teen number. They analyze the number sentences that best represent each situation (**K.NBT.1**). Throughout the lesson, students draw the number of objects presented in the situation (**K.CC.5**).

The module closes with an exploration in which students count teen quantities and represent them in various ways as the teacher gives the prompt, “Open your mystery bag. Show the number of objects in your bag in different ways using the materials you choose.” This exercise also serves as a culminating assessment, allowing the student to demonstrate skill and understanding in applying all the learning gained throughout the module.

### A Teaching Sequence Towards Mastery of Representing and Applying Compositions and Decompositions of Teen Numbers

**Objective 1:** Represent teen number compositions and decompositions as addition sentences.  
(Lesson 20)

**Objective 2:** Represent teen number decomposition as 10 ones and some ones, and find a hidden part.  
(Lesson 21)

**Objective 3:** Decompose teen numbers as 10 ones and some ones; compare *some ones* to compare the teen numbers.  
(Lessons 22)

**Objective 4:** Reason about and represent situations, decomposing teen numbers into 10 ones and some ones, and composing 10 ones and some ones into a teen number.  
(Lesson 23)

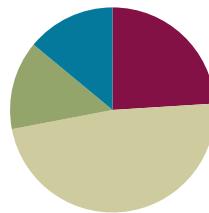
**Objective 5:** Culminating Task—Represent teen number decompositions in various ways.  
(Lesson 24)

## Lesson 20

**Objective:** Represent teen number compositions and decompositions as addition sentences.

### Suggested Lesson Structure

|                      |                     |
|----------------------|---------------------|
| Fluency Practice     | (12 minutes)        |
| Application Problems | (7 minutes)         |
| Concept Development  | (24 minutes)        |
| Student Debrief      | (7 minutes)         |
| <b>Total Time</b>    | <b>(50 minutes)</b> |



### Fluency Practice (12 minutes)

- Dot Cards of Seven **K.CC.5, K.CC.2** (4 minutes)
- Count Crossing Tens **K.CC.1** (4 minutes)
- Group Tens and Ones **K.CC4** (4 minutes)

### Dot Cards of Seven (4 minutes)

Materials: (T) Varied dot flashes with 7 dots

T: (Show 7 dots.) How many do you see? (Give students time to count.)

S: 7.

T: How can you see 7 in two parts?

S: (Coming up to the card.) 5 here and 2 here.

T: Say the number sentence.

S: 5 and 2 makes 7.

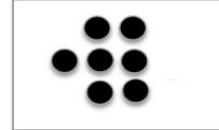
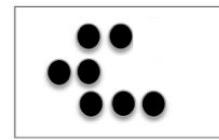
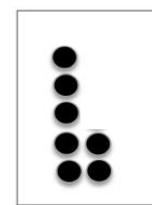
T: Who sees 7 in two different parts?

S: (Coming up to the card.) I see 3 here and 4 here.

T: Say the number sentence.

S: 3 and 4 makes 7.

Continue with other cards of seven.



## Count Crossing Tens (4 minutes)

Materials: (T) Personal Rekenreks.

For this activity, you may wish to combine six elastics of beads onto one card if you prefer. However, it may give more number sense to have the students use their three individual cards as described below so that students reference where they left off very clearly when counting to 40.)

- T: Today we're going to work in groups of 3. Put your personal Rekenreks together and count your beads. Say 'buzz' after you finish a row. Partner A moves the beads of the first Rekenrek, Partner B moves the beads of the second, and Partner C moves beads of the third.
- T: If you finish early, count again. This time, after the color changes, say 'buzz.'



## Group Tens and Ones (4 minutes)

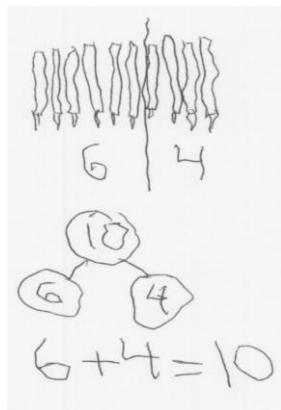
Materials: (T) Prepared images of arrays, circular configurations and ten-frames

- T: (Project a circular configuration of 12 objects.) Say the number of objects that you see.
- S: (Pause while they count.) 12.
- T: Say the number the Say Ten way.
- S: 1 ten two.

Repeat process for four or five other numbers between 10 and 100, mixing arrays, circular configurations, and ten-frame cards.

## Application Problems (7 minutes)

Each student got 6 colored pencils and 4 regular pencils. How many pencils did each student get? Draw a picture, a number bond, and write a number sentence, too.



### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Increase the learning pace for students who are above grade level by providing with extensions to the Application Problem:

- What if each student got 16 colored pencils and 4 regular pencils? How many all together?  
*Hint: Use your first drawing to help you solve.*
- How many pencils would two students have all together? *Hint: Use your first two drawings to help you solve.*

## Concept Development (24 minutes)

Materials: (S) Bag of twenty 2-color beans per student, personal white boards with blank number bond sheet inside

T: Put 10 red beans in one part of the number bond. Put 3 white beans in the other part.

T: What is 10 ones and 3 ones?

S: 13 ones.

T: Say the number the Say Ten way.

S: Ten three.

T: Now count 13 beans into the place where we show the total or whole amount.

T: So we have 13 in two parts. What are the parts?

S: 10 and 3.

T: Talk to your partner. When we solved our story problem today, we had two parts. What is another way you already know to show a number in two parts?

S: We can show a number in two parts by making piles of things, like 10 things and 3 things. → We can show the number with a number bond. → We can make a picture. → We can show it with our Hide Zero cards. → We can show it on the Rekenrek. → We can show it with a plus sign.

**MP.3**

T: Lots of good ideas. We can show the same idea in so many ways. When we are thinking about 13, what do you think is the clearest way to show the two parts of 10 and 3. Talk to your partner.

S: To me, the number bond. It's so easy to see. → Yeah, but I like to see how big the number is so counters are my favorite. → I feel big girls and boys do addition so that's how I want to show it.

T: Each way we show a number in two parts helps us to understand our number better. Addition is another way to do that.

T: (Write  $10 + 3 = \underline{\hspace{2cm}}$  on the board.)

T: What is  $10 + 3$ ? Give me a complete number sentence.

S:  $10 + 3 = 13$ .

T: (Write 13 on the board to complete the equation.) Look at your number bond. How many beans do you have in the whole amount?

S: 13. (Write  $13 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$  on the board.)

T: How many beans are in this part? Let's count.

S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

T: How many beans are in this part?

S: 3!

T: Look at the parts. Complete this number sentence. (Pointing to  $13 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$ .)

S:  $13 = 10 + 3$ .



### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Ask your English language learners who are developing language skills to write their answer on their personal white boards as well as say it aloud. After writing and saying the answer orally, have all students repeat the number sentence out loud again.

- T: We started with the whole amount with our beans so our number sentence also starts with the whole amount.
- T: Clear your boards. Show 10 red beans and 5 white beans in the two parts.
- T: Now count to find out many beans will you put to show the total. It needs to match the amount in the parts.
- S: (After counting.) 15!
- T: Count that many beans into the place where you put your total.
- T: (After counting.) What is another way to show the two parts and the total?
- S:  $10 + 5 = 15$ .
- T: (Write  $10 + 5 = 15$  on the board.)
- T: Do you have the same number of beans in the parts as you have in the place for the total?
- S: Yes!
- T: When 15 is split into two parts is it the same as 10 and 5? Then your number bond is true!
- T: Clear your boards. This time, use your marker to write 19 where we show the whole. Let's put this number in two parts.
- T: Show 10 red beans as one part. (Pause while students place the beans.)
- T: Count out the beans you need to put in the other part to get to 19.
- S: (After counting.) 9!
- T: What is one number sentence that tells about this number bond?
- S:  $10 + 9 = 19$ .
- T: This time start with the total so we really feel that big number splitting into two parts.
- S:  $19 = 10 + 9$ .

Continue in this manner with students creating and talking about other teen number bonds and their matching addition sentences

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Note: Have the students complete the bonds and number sentences. Give them access to materials and Hide Zero cards as they do so.

NYS COMMON CORE MATHEMATICS CURRICULUM

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

Fill in the number bonds and write a number sentence to match it.

Example:

$13 = \underline{10} + \underline{3}$

$15 = \underline{10} + \underline{5}$

$17 = \underline{10} + \underline{7}$

$10 + 8 = \underline{18}$

$10 + 6 = \underline{16}$

$\underline{14} = 10 + 4$

$10 + 2 = \underline{12}$

$10 + 1 = \underline{11}$

Early finishers:  
Make up your own  
teen number  
bonds and  
sentences on the  
back!

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Lesson Name EXACTLY GK-M5-TE-L20.docx

Lesson #: 1/14/13

X.X.4

engage<sup>ny</sup>

## Student Debrief (7 minutes)

**Lesson Objective:** Represent teen number compositions and decompositions as addition 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, taking turns reading the numbers forward and back. 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.

- In a number bond, which number is larger, the whole or a part?
- Explain how the teen numbers are 10 ones and some more ones.
- Look at each number bond as I say the whole. You read the number the Say Ten way, e.g., I say 13 and you say ten three.
- Mental math: I say 16, you say  $10 + 6$ .
- Show a row of ten on the Rekenrek, and then slide beads to show the teen numbers. Students say the numbers the regular and the Say Ten way.
- What are we doing with the parts when we add? Are we putting them together or taking them apart?

## 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.



Lesson 20:

Represent teen number compositions and decompositions as addition sentences.

Date:

11/14/13

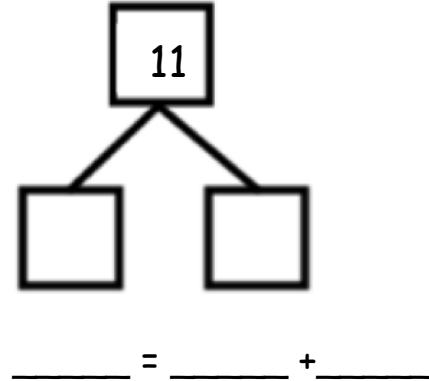
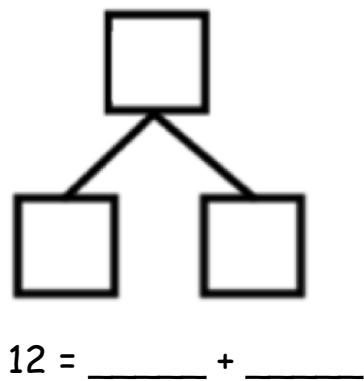
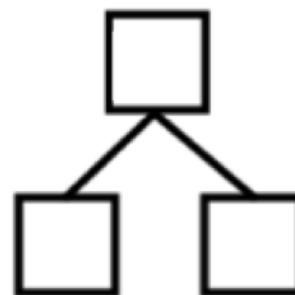
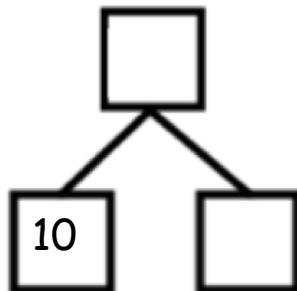
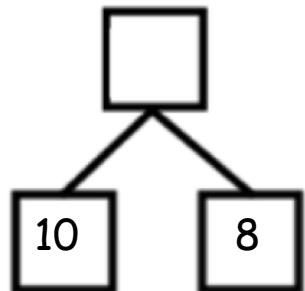
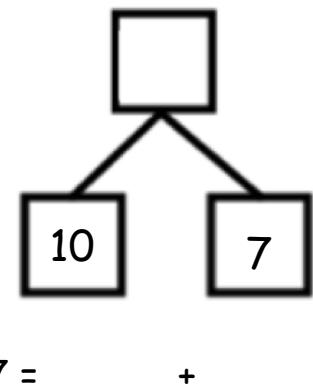
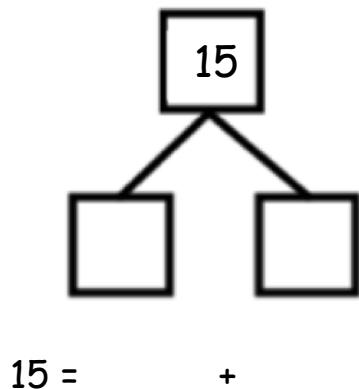
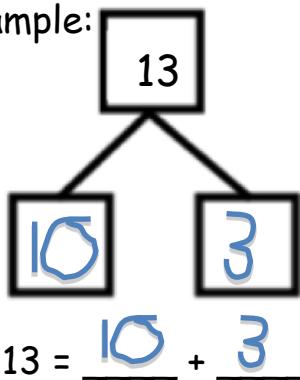
5.E.7

Name \_\_\_\_\_

Date \_\_\_\_\_

Fill in the number bonds and write a number sentence to match it.

Example:



**Early finishers:**  
Make up your own  
teen number  
bonds and  
sentences on the  
back!

Name \_\_\_\_\_

Date \_\_\_\_\_

|   |   |   |   |
|---|---|---|---|
| 5 | 1 | 2 | 3 |
|---|---|---|---|

The first number is the whole. Circle its parts.

|    |    |   |   |
|----|----|---|---|
| 12 | 10 | 6 | 2 |
|----|----|---|---|

|    |   |    |   |
|----|---|----|---|
| 11 | 1 | 10 | 8 |
|----|---|----|---|

|    |   |   |    |
|----|---|---|----|
| 14 | 4 | 2 | 10 |
|----|---|---|----|

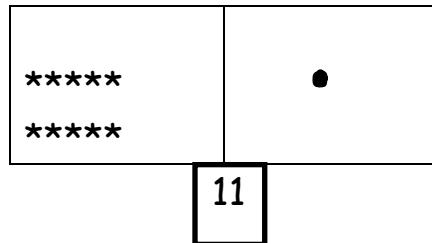
|    |   |    |   |
|----|---|----|---|
| 18 | 1 | 10 | 8 |
|----|---|----|---|

|    |    |   |   |
|----|----|---|---|
| 10 | 10 | 1 | 0 |
|----|----|---|---|

|    |    |   |    |
|----|----|---|----|
| 20 | 10 | 2 | 10 |
|----|----|---|----|

Name \_\_\_\_\_

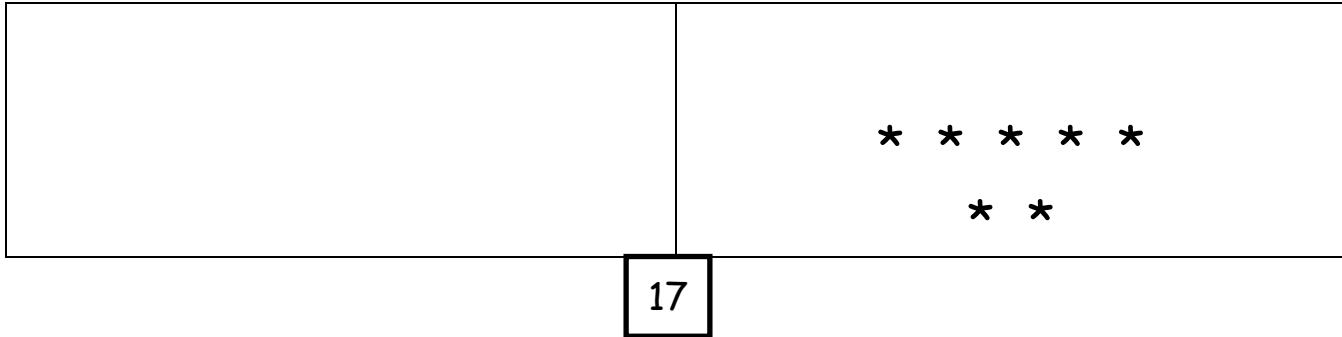
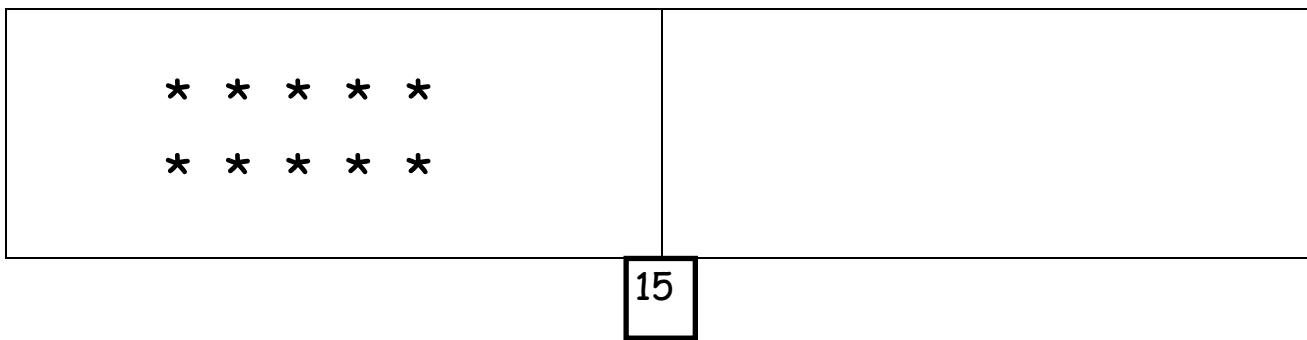
Date \_\_\_\_\_



$$10 + 1 = 11$$

$$11 = 10 + 1$$

Draw stars to show the number as a number bond of 10. Show each example as two addition sentences of 10 ones and some ones.



\* \* \* \* \*

\* \* \* \* \*

19

\* \* \* \* \*

\* \* \* \* \*

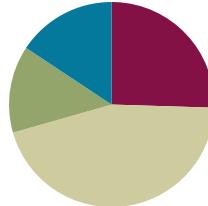
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## Lesson 21

**Objective:** Represent teen number decompositions as 10 ones and some ones, and find a hidden part.

### Suggested Lesson Structure

|                      |                     |
|----------------------|---------------------|
| Fluency Practice     | (13 minutes)        |
| Application Problems | (7 minutes)         |
| Concept Development  | (22 minutes)        |
| Student Debrief      | (8 minutes)         |
| <b>Total Time</b>    | <b>(50 minutes)</b> |



### Fluency Practice (13 minutes)

- Number Bonds of Seven **K.CC.2** (4 minutes)
- Four Rekenreks **K.CC.1** (5 minutes)
- Count Teen Numbers **K.CC.5** (4 minutes)

### Number Bonds of Seven (4 minutes)

Materials: (T) Dot cards of seven

Show a dot card and indicate 6 and 1 as parts.

- T: Say the biggest part. (Give students time to count.)  
 S: 6.  
 T: Say the smallest part.  
 S: 1.  
 T: What is the total number of dots? (Give time to count.)  
 S: 7.  
 T: Say the number sentence.  
 S: 6 and 1 makes 7.  
 T: (Turn the card around to get 1 and 6.)

Continue with 5 and 2, 8 and 0, 4 and 3.

### A NOTE ON STANDARDS ALIGNMENT:

In this lesson, students decompose teen numbers into two parts with blocks and hide one of the parts. After guessing what the hidden part is, they then see a number sentence with a “hidden part” such as  $12 = 10 + \underline{\hspace{1cm}}$ . This bridges to Grade 1 content (**1.OA.8**).

## Four Rekenreks (5 minutes)

Materials: (S) Personal Rekenrek for each student

T: Sit in groups of 4. Put your Rekenreks together. Partner A moves the beads of the first row. Partner B moves the beads of the second row, etc. After each number that ends a row, say "bop."

## Count Teen Numbers (4 minutes)

T: Count from 11 to 20 the Say Ten way.

S: Ten 1, ten 2, ten 3, ten 4, ten 5, ten 6, ten 7, ten 8, ten 9, 2 tens.

T: Count back from 20 to 11 the Say Ten way.

S: 2 tens, ten 9, ten 8, ten 7, ten 6, ten 5, ten 4, ten 3, ten 2, ten 1.

T: Count from 11 to 20 the regular way.

S: 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

T: Count back from 20 to 11 the regular way.

S: 20, 19, 18, 17, 16, 15, 14, 13, 12, 11.

T: Now I want you to change the way you count each time. We'll say the first number the Say Ten way. Then we'll say the next number the regular way. Listen to my example. Ten one, 12, ten three, 14, ten five, 16. Now it's your turn.

S: Ten one, 12, ten three, 14, ten five, 16, ten seven, 18, ten nine, 20.

T: Count back from 20 to 11 starting with the Say Ten way.

S: 2 tens, 19, ten eight, 17, ten six, 15, ten four, 13, ten two, 11.

## Application Problem (7 minutes)

Peter saw 8 puppies at the pet store in a cozy cage. While he was watching them, 2 hid in a little box. How many puppies could Peter see then? Draw a picture and write a number bond and number sentence to match the story.



### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Differentiate the Application Problem for your students who are below grade level by asking them to put the puppies (counters) in a ten-frame.

Ask your above grade level students to double the number of puppies in the cage using two ten-frames to show you 10 and some more?

## Concept Development (23 minutes)

Materials: (S) For each pair of students: 40 centimeter cubes, blank number bond workmat inside a personal white board

T: Count out 12 cubes and put them in the place where we show the whole on the number bond.

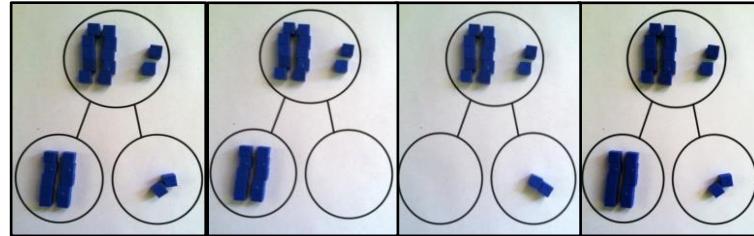
T: Group 10 ones within that place.

T: What are the parts of 12 you see?

S: 10 and 2.

T: Count out cubes to fill in parts so that the total and the parts are equal.

S: (Students do so.)



T: Fill in this number sentence with me. (On the board, write  $12 = \underline{\quad} + \underline{\quad}$ .)

S:  $12 = 10 + 2$ .

T: Say the number the Say Ten way.

S: Ten two.

T: Close your eyes. (Remove the 2 cubes.) What part is hiding?

S: 2!

T: Fill in this number sentence with me. (Write  $12 = 10 + \underline{\quad}$  on the board.)

S:  $12 = 10 + 2$ . (Put the cubes back as they say the statement.)

T: Close your eyes. (Remove the 10 cubes.) What part is hiding?

S: 10 ones!

T: Fill in this number sentence with me. (Write  $12 = \underline{\quad} + 2$  on the board.)

S:  $12 = 10 + 2$ .

Continue in this manner with other teen numbers. Have students then work in pairs to play “Hide and Say the Hidden Part.”

- Partner A builds a teen number in the place for the total or whole.
- Partner B models the number as two parts.
- Partner A closes her eyes while Partner B hides one part.
- Partner A writes the complete number sentence (not with a missing addend, e.g.  $14 = 10 + 4$ ). Switch roles.

T: We had a hidden part like in our story problem of the puppies. We didn't know the part that Peter could still see in the cozy cage after the two puppies hid inside the box!



### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

The teen numbers represent a particular challenge for English language learners because the difference between “thirteen” and “thirty” is not easy to hear. Scaffold the lesson for the students by providing them with visuals of the teen numbers in both written form and in the numeral form. Students also need practice hearing (with finger at your mouth to stress the “teen” of the number) saying “thirteen” and “fourteen” so that they can hear the stress on the “teen” part of the number.

## Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Be sure that students have access to materials such as counters, Hide Zero cards and personal white boards for drawing while using the Problem Set. Encourage them to think about and demonstrate the many ways they can show teen numbers in two parts.

Note: In this Problem Set, students use blocks and decompose teen numbers into two parts and then write corresponding equations.  $12 = 10 + \underline{\hspace{2cm}}$ . This bridges to Grade 1 content (**1.OA.8**).

## Student Debrief (8 minutes)

**Lesson Objective:** Represent teen number decompositions as 10 ones and some ones, and find a hidden part.

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, taking turns reading the numbers forward and back. 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.

- What did you get better at today?
- What do you notice from the Problem Set? (An example follows.)

T: Look at the first two number bonds. What is the same and different about these two bonds?

S: Both bonds have 10 ones. → Yeah but they don't have the same number of extra ones. → One has 9 extra ones and the other has 5 extra ones. → If you count all the ones together, one is nineteen and one is fifteen. → If we count the Say Ten way, one is ten nine and one is ten five. → If you break apart both the numbers, there are 10 ones and some ones inside! → The number sentences show that we can write 19 and 15 in number sentences with 10 plus in them.

NYS COMMON CORE MATHEMATICS CURRICULUM

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

Fill in the number bonds and write a number sentence to match it.

|  |  |  |
|--|--|--|
| $\begin{array}{c} 15 \\ \diagdown \quad \diagup \\ 10 \quad 5 \end{array}$ | $\begin{array}{c} 19 \\ \diagdown \quad \diagup \\ 10 \quad 9 \end{array}$ | $\begin{array}{c} 13 \\ \diagdown \quad \diagup \\ 10 \quad 3 \end{array}$ |
| $10 + \underline{5} = 15$  | $19 = 10 + \underline{9}$  | $10 + \underline{3} = 13$  |

|  |  |  |
|--|--|--|
| $\begin{array}{c} 16 \\ \diagdown \quad \diagup \\ 10 \quad 6 \end{array}$ | $\begin{array}{c} 14 \\ \diagdown \quad \diagup \\ 10 \quad 4 \end{array}$ | $\begin{array}{c} 12 \\ \diagdown \quad \diagup \\ 10 \quad 2 \end{array}$ |
| $10 + 6 = \underline{16}$  | $\underline{14} = 10 + 4$  | $10 + 2 = \underline{12}$  |

|  |  |  |
|--|--|--|
| $\begin{array}{c} 17 \\ \diagdown \quad \diagup \\ 10 \quad 7 \end{array}$ | $\begin{array}{c} 11 \\ \diagdown \quad \diagup \\ 10 \quad 2 \end{array}$ | $\begin{array}{c} 18 \\ \diagdown \quad \diagup \\ 10 \quad 8 \end{array}$ |
| $\underline{10} + 7 = 17$  | $10 + \underline{2} = \underline{12}$                                      | $10 + \underline{8} = \underline{18}$                                      |

COMMON CORE Lesson #: \_\_\_\_\_ Lesson Name EXACTLY GK-MS-TE-121.docx 1/16/13 engage<sup>ny</sup> X.X.4

NYS COMMON CORE MATHEMATICS CURRICULUM

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

Finish the number sentences and number bonds.

Example:  $\begin{array}{c} 11 \\ \diagdown \quad \diagup \\ 10 \quad 1 \end{array}$

|                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| $11 = 10 + \underline{1}$ | $12 = 10 + \underline{2}$ | $13 = 10 + \underline{3}$ |
| $10 + \underline{1} = 11$ | $10 + \underline{2} = 12$ | $10 + \underline{3} = 13$ |

|  |  |  |
|--|--|--|
| $\begin{array}{c} 15 \\ \diagdown \quad \diagup \\ 10 \quad 5 \end{array}$ | $\begin{array}{c} 17 \\ \diagdown \quad \diagup \\ 10 \quad 7 \end{array}$ | $\begin{array}{c} 18 \\ \diagdown \quad \diagup \\ 10 \quad 8 \end{array}$ |
| $10 + 5 = 15$  | $\underline{10} + 7 = 17$  | $10 + 8 = 18$  |
| $15 = \underline{10} + 5$  | $17 = \underline{10} + 7$  | $18 = 10 + \underline{8}$  |

|  |  |
|--|--|
| $\begin{array}{c} 16 \\ \diagdown \quad \diagup \\ 10 \quad 6 \end{array}$ | $\begin{array}{c} 19 \\ \diagdown \quad \diagup \\ 10 \quad 9 \end{array}$ |
| $16 = 6 + \underline{10}$  | $19 = 10 + \underline{9}$  |
| $6 + \underline{10} = 16$  | $10 + \underline{9} = 19$  |

COMMON CORE Lesson #: \_\_\_\_\_ Lesson Name EXACTLY GK-MS-TE-121.docx 1/16/13 engage<sup>ny</sup> X.X.5

- What can you explain about the numbers 11, 12, 13, 14, 15, 16, 17, 18, 19? What do they have in common? How are they different?
- What do you think I was trying to teach you in this lesson?

**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.



Lesson 21:

Represent teen number decompositions as 10 ones and some ones,  
and find a hidden part.

Date: 11/14/13

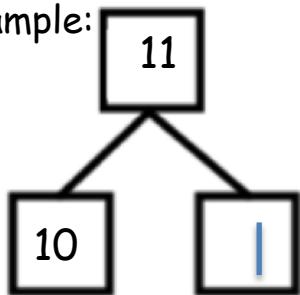
**5.E.16**

Name \_\_\_\_\_

Date \_\_\_\_\_

Model each number with cubes on your number bond mat. Then complete the number sentences and number bonds.

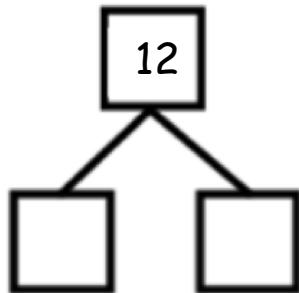
Example:



$$11 = 10 + \underline{\hspace{1cm}}$$

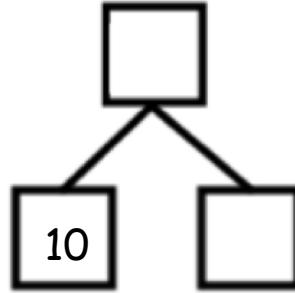
$\downarrow$

$$10 + \underline{\hspace{1cm}} = 11$$



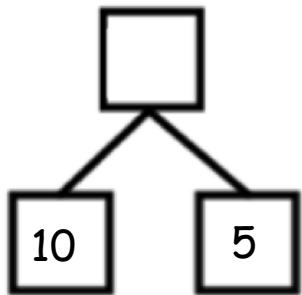
$$12 = 10 + \underline{\hspace{1cm}}$$

$$10 + \underline{\hspace{1cm}} = 12$$



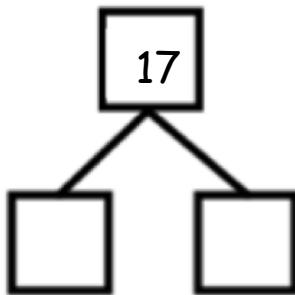
$$13 = 10 + \underline{\hspace{1cm}}$$

$$10 + \underline{\hspace{1cm}} = 13$$



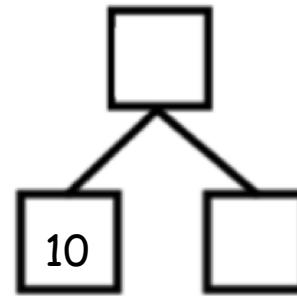
$$\underline{\hspace{1cm}} + 5 = 15$$

$$15 = \underline{\hspace{1cm}} + 5$$



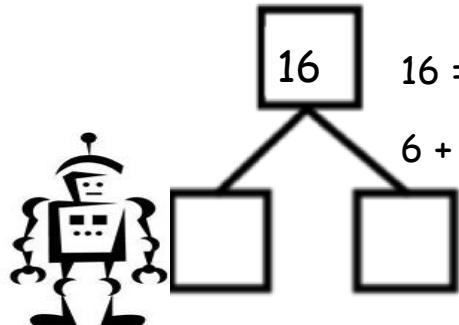
$$\underline{\hspace{1cm}} + 7 = 17$$

$$17 = \underline{\hspace{1cm}} + 7$$



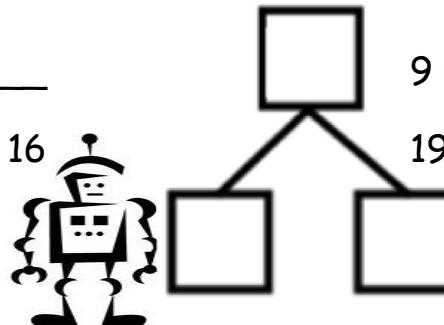
$$\underline{\hspace{1cm}} + 8 = 18$$

$$18 = 10 + \underline{\hspace{1cm}}$$



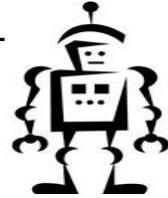
$$16 = 6 + \underline{\hspace{1cm}}$$

$$6 + \underline{\hspace{1cm}} = 16$$



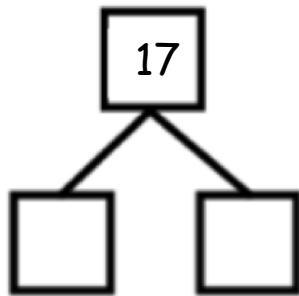
$$9 + \underline{\hspace{1cm}} = 19$$

$$19 = 10 + \underline{\hspace{1cm}}$$

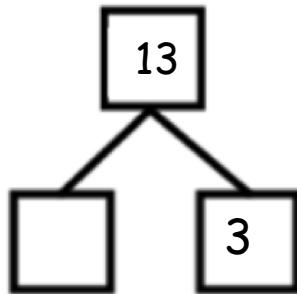


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Complete the number sentences and number bonds. Use your materials to help you.



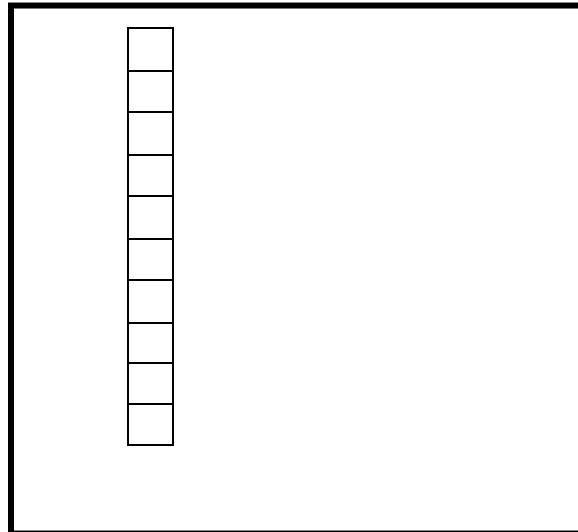
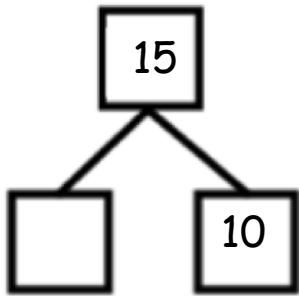
$$\underline{\quad} + 7 = 17 \qquad 17 = \underline{\quad} + 10$$



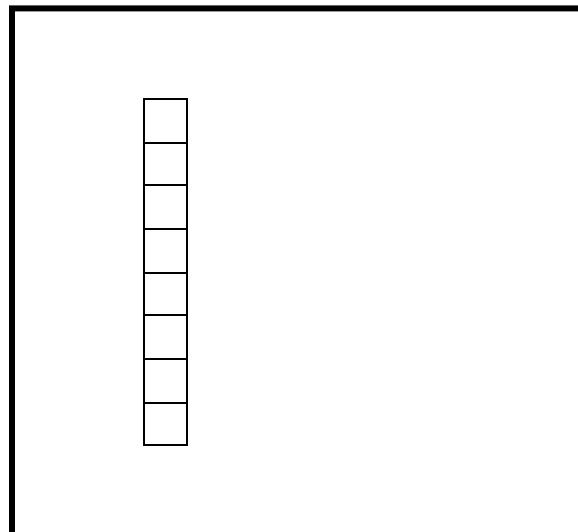
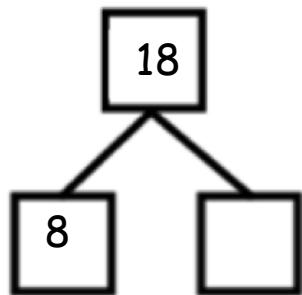
$$\underline{\quad} + 3 = \underline{\quad} \qquad 13 = \underline{\quad} + 1$$

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

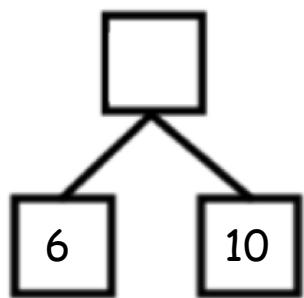
Complete the number bonds and number sentences. Draw the cubes of the missing part.



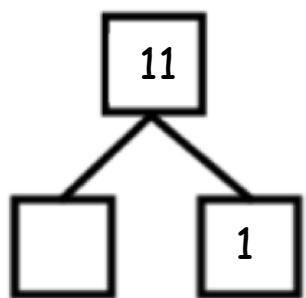
$$15 = \underline{\hspace{2cm}} + 10$$



$$\underline{\hspace{2cm}} + 8 = 18$$



$$6 + 10 = \underline{\hspace{2cm}}$$



$$1 + \underline{\hspace{2cm}} = 11$$

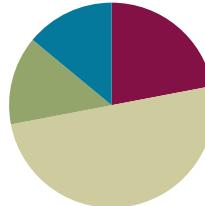
□

## Lesson 22

**Objective:** Decompose teen numbers as 10 ones and some ones; compare some ones to compare the teen numbers.

### Suggested Lesson Structure

|                      |                     |
|----------------------|---------------------|
| Application Problems | (7 minutes)         |
| Fluency Practice     | (11 minutes)        |
| Concept Development  | (25 minutes)        |
| Student Debrief      | (7 minutes)         |
| <b>Total Time</b>    | <b>(50 minutes)</b> |



### Application Problem (7 minutes)

Lisa has 5 pennies in her hand and 2 in her pocket. Matt has 6 pennies in his hand and 2 in his pocket. Who has fewer pennies, Lisa or Matt? Who has more pennies? How do you know?

### Fluency Practice (11 minutes)

- Dot Cards of Eight **K.CC.5, K.CC.2** (3 minutes)
- Count Teen Numbers **K.NBT.1** (4 minutes)
- Teen Numbers on the Rekenrek **K.NBT.1** (4 minutes)

### Dot Cards of Eight (3 minutes)

Materials: (T) Varied dot cards of 8

T: (Show a card with 8 dots.) How many dots do you count?  
Wait for the signal to tell me.

S: 8.

T: How can you see them in two parts?

S: (Student comes up to the card.) I saw 5 here and 3 here.

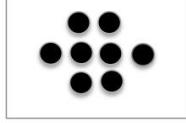
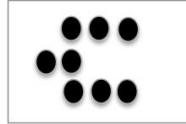
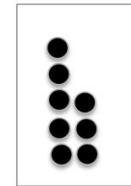
T: Say the number sentence.

S: 5 and 3 makes 8.



### A NOTE ON STANDARDS ALIGNMENT:

In this lesson, students compare numbers 1–9 (**K.CC.6, K.CC.7**) and use their understanding of 10 ones as the structure of the teen numbers (**K.NBT.1** and **MP.7**) to compare teen numbers. This bridges Kindergarten content to Grade 1 comparison of numbers (**1.NBT.3**).



- T: Flip it.  
 S: 3 and 5 makes 8.  
 T: Who sees 8 in two different parts?  
 S: (Come up to the card.) I see 6 here and 2 here.  
 T: Say the number sentence.  
 S: 6 and 2 makes 8.  
 T: Flip it.  
 S: 2 and 6 makes 8.

Continue with other cards and decompositions of 8.

### Count Teen Numbers (4 minutes)

- T: Count from 11 to 20 and back to 11 the Say Ten way.  
 S: Ten one, ten two, ten three, ten four, ten five, ten six, ten seven, ten eight, ten nine, 2 tens, ten nine, ten eight, ten seven, ten six, ten five, ten four, ten three, ten two, ten one.  
 T: Count from 11 to 20 and back to 11 the regular way.  
 S: 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11.  
 T: Now I want you to change the way you count each time. We'll say the first number the regular way. Then we'll say the next number the Say Ten way. Listen to my example. 11, ten two, 13, ten four, 15, ten six. Now it's your turn.  
 S: 11, ten two, 13, ten four, 15, ten six, 17, ten eight, 19, 2 tens.  
 T: Count back from 20 to 11 starting with the regular way.  
 S: 20, ten nine, 18, ten seven, 16, ten five, 14, ten three, 12, ten one.

### Teen Numbers on the Rekenrek (4 minutes)

Materials: (S) Personal Rekenrek

- T: Show me the number 12 in two parts on your Rekenrek with one part 10 ones on your top row.  
 S: (Students show 12 on their Rekenrek.)  
 T: Now show me 12 again but this time with 10 ones that are all red.  
 T: Now show me 12 again but this time with 10 ones that are all white.

Continue with other teen numbers.

### Concept Development (25 minutes)

Materials: (S) 20 linking cubes per student, personal white board

- T: Use your personal white board as a work mat. Partner A, count out 13 cubes on your mat. Partner B, count out 15 cubes on your mat.



Lesson 22:

Decompose teen numbers as 10 ones and some ones; compare some ones to compare the teen numbers.

Date:

11/14/13

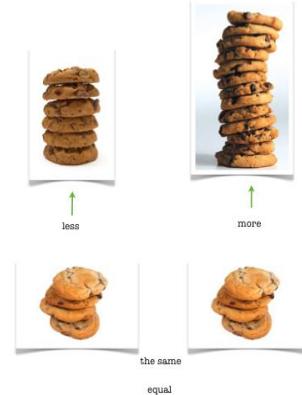
5.E.22

- T: Now each of you move your cubes to show the number the Say Ten way. Partner A, tell me your number the Say Ten way.
- S: (Partner A only.) Ten three.
- T: Partner B, tell me your number the Say Ten way.
- S: (Partner B only.) Ten five.
- T: How can we tell which number is bigger? You both have 10 ones, true?
- S: Yes.
- T: So let's look at the extra ones. Which number is bigger, 3 ones or 5 ones?
- S: 5 ones!
- T: So which number is bigger, ten 3 or ten 5?
- S: Ten five!
- T: Let's all say 15 is more than 13.
- S: 15 is more than 13.
- T: Let's say that the Say Ten way. Ten five is more than ten three.
- S: Ten five is more than ten three.
- T: Now, Partner A, show me 14 on your mat as 10 ones and some ones. Partner B, show 11 on your mat as 10 ones and some ones.
- T: Do you both have 10 ones?
- S: Yes.
- T: So let's compare the extra ones. Which part is smaller, 4 ones or 1 one?
- S: 1 one!
- T: Talk to your partner about which number is smaller and which number is bigger and how you know.
- S: (Students talk.)
- T: Now I want both Partner A and Partner B to show 17 on your mat. Show it as 10 ones and some ones.
- T: Do you both have 10 ones?
- S: Yes.
- T: How many extra ones do you both have?
- S: 7!
- T: Is 7 more than 7?
- S: No!
- T: Is 10 more than 10?
- S: No!

### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Before beginning the lesson, introduce or review key vocabulary for English language learners so that they can keep up with the lesson. Post visuals key terms such as “bigger”, “smaller”, “less”, “more” and “the same”.

### key words



### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Give students with disabilities a lot of practice with composing and decomposing numbers as 10 and some more ones using manipulatives, number bonds, and interactive technology such as the fast paced game at:

<http://maths.primarytopics.co.uk/calculating/mental/year1/interactive/games/teen2g.htm>

T: What should we say about 17 and 17?

S: They're the same! They're equal!

Continue in this manner but without the cubes and personal white boards. Draw two number bonds on the board. Fill one number bond in with 19 decomposed showing 10 ones as one part. Fill the other number bond with 16 decomposed showing 10 ones as one part.

T: (Point to 19.) What is the missing part?

S: 9. (Fill in 9.)

T: (Point to 16.) What is the missing part?

S: 6. (Fill in 6.)

T: Compare the extra ones. Which number is more?

S: 19.

T: We are using what we know about comparing the numbers less than 10 to compare numbers that are more than 10!

T: Talk to your partner about that.

**MP.7** S: I know 5 is more than 4 so I know 10 ones and 5 ones is more than 10 ones and 4 ones. → I know that 5 is less than 8 so ten five is less than ten eight. → I know that 6 equals 6 so ten six equals ten six. → I know that 10 ones is the same, so it's like both numbers have it so it doesn't change which one is bigger or smaller.

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Note: This work, like many of the lessons in this module, allows students to see the relevance of their numbers to 10 to success with larger numbers. Students “stand” on the shared structure of the ten in two teen numbers and simply compare the ones to see which number is greater. This bridges Grade 1 content (**1.NBT.3**).

### Student Debrief (7 minutes)

**Lesson Objective:** Decompose teen numbers as 10 ones and some ones; compare *some ones* to compare the teen numbers.

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, taking turns reading the numbers forward and back. 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.

- What was today's lesson about?
- Ask students to explain why 11 is less than 15.

- Have students read each comparison from the Problem Sets the Say Ten way and then the regular way. For example, “ten 3 is more than ten 2. 13 is more than 12. Ten 1 is less than ten 4. 11 is less than 14”.
- What do you think I wanted you to learn from the lesson?

### 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.

NYS COMMON CORE MATHEMATICS CURRICULUM

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

Circle 10 erasers.  Circle 10 pencils. Match the extra ones to see which group has more. ✓ Check the group that has more things.

Circle 10 sandwiches.  Circle 10 milk cartons. Match the extra ones to see which group has less. ✓ Check the group that has less things.

Circle 10 baseballs.  Circle 10 gloves. Write how many are in each group. ✓ Check the group that has more things.

16      16

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engage<sup>ny</sup>

NYS COMMON CORE MATHEMATICS CURRICULUM

Circle 10 apples.  Circle 10 oranges. Write how many are in each group. ✓ Check the group that has less.

15      12

Circle 10 spoons.  Circle 10 forks. Write how many are in each group.

19      18

more      is      than      less

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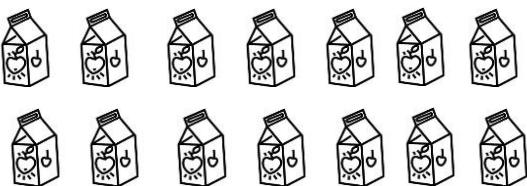
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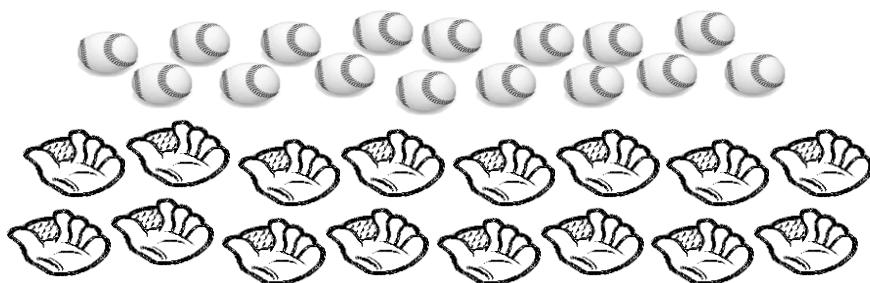
**Circle** 10 erasers. **Circle** 10 pencils. Match the extra ones to see which group has more.



**Circle** 10 sandwiches. **Circle** 10 milk cartons. Check  the group that has less things.

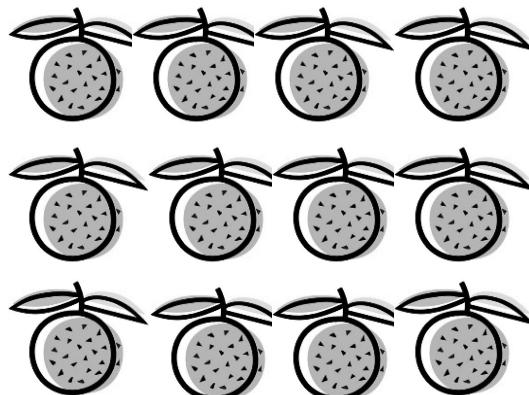


**Circle** 10 baseballs. **Circle** 10 gloves. Write how many are in each group.  
 Check the group that has more things.

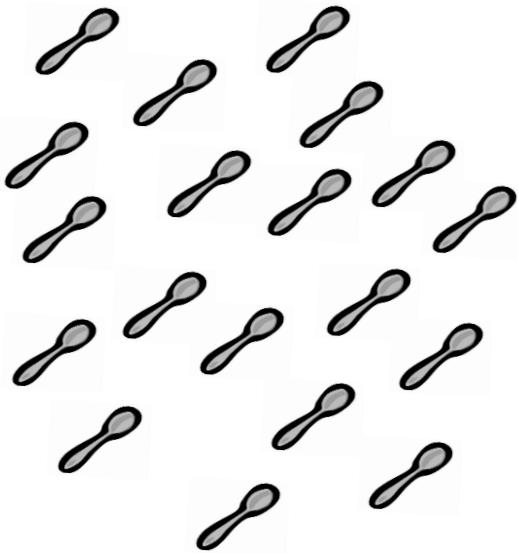


**Circle** 10 apples. **Circle** 10 oranges. Write how many in each group. Check the group that has less.






**Circle** 10 spoons. **Circle** 10 forks. Write how many are in each group.



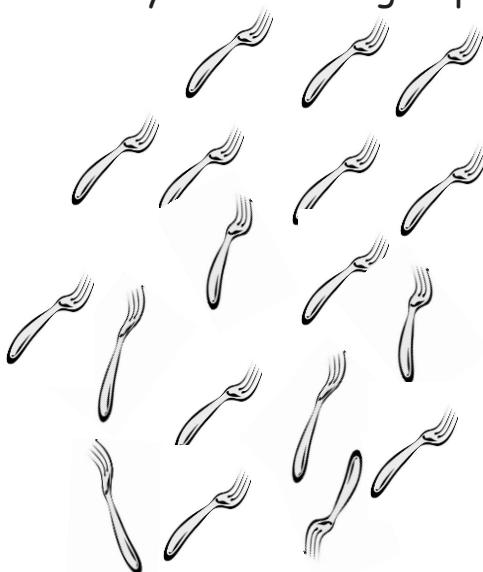

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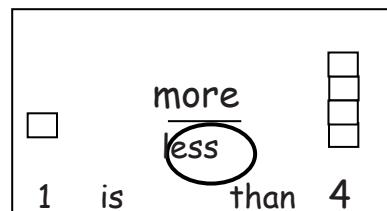
than

less



Name \_\_\_\_\_

Date \_\_\_\_\_

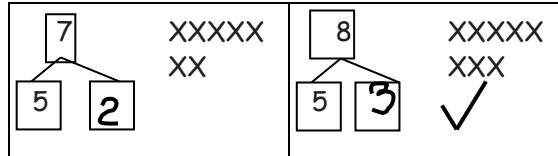


Count and write the number. Circle more or less.

|   |
|---|
| <br>$\underline{\hspace{2cm}}$ is <u>more</u> than $\underline{\hspace{2cm}}$ |
|   |
| <br>$\underline{\hspace{2cm}}$ is <u>more</u> than $\underline{\hspace{2cm}}$ |
|   |
| <br>$\underline{\hspace{2cm}}$ is <u>more</u> than $\underline{\hspace{2cm}}$ |

Name \_\_\_\_\_

Date \_\_\_\_\_



Fill in the number bond. Check the group with more.

|   |  |   |   |
|---|--|---|---|
| <p>16</p> <p>10      <input type="text"/></p> | <p>XXXXX<br/>XXXXX<br/>OOOOO<br/>O</p> | <p>17</p> <p>10      <input type="text"/></p> | <p>XXXXX<br/>XXXXX<br/>OOOOO<br/>OO</p> |
|---|--|---|---|

|  |  |   |                              |
|--|--|---|------------------------------|
| <p>13</p> <p><input type="text"/>      3</p> | <p>XXXXX<br/>XXXXX<br/>OOOOO<br/>OOO</p> | <p>11</p> <p>10      <input type="text"/></p> | <p>XXXXX<br/>XXXXX<br/>O</p> |
|--|--|---|------------------------------|

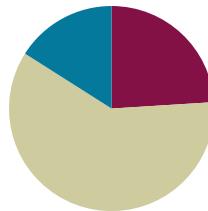
|  |                               |   |  |
|--|-------------------------------|---|--|
| <p><input type="text"/></p> <p>10      2</p> | <p>XXXXX<br/>XXXXX<br/>OO</p> | <p><input type="text"/></p> <p>10      10</p> | <p>XXXXX<br/>XXXXX<br/>OOOOO<br/>OOOOO</p> |
|--|-------------------------------|---|--|

## Lesson 23

**Objective:** Reason about and represent situations, decomposing teen numbers into 10 ones and some ones, and composing 10 ones and some ones into a teen number.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (12 minutes)        |
| Concept Development | (30 minutes)        |
| Student Debrief     | (8 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (12 minutes)

- Number Bonds of Eight **K.NBT.1** (4 minutes)
- Matching Dot and Number Cards **K.NBT.1** (8 minutes)

### Number Bonds of Eight (4 minutes)

Materials: (T) Dot cards of eight

Show a dot card and indicate 7 and 1 as parts.

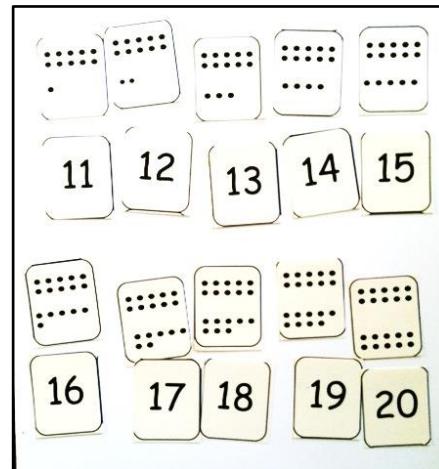
- T: Say the biggest part. (Give students time to count).  
 S: 7.  
 T: Say the smallest part.  
 S: 1.  
 T: What are the total number of dots? (Give time to count.)  
 S: 8.  
 T: Say the number sentence.  
 S: 7 and 1 makes 8.  
 T: Flip it.  
 S: 1 and 7 makes 8.

Continue with cards illustrating the number bonds of 5 and 3, 4 and 4, 6 and 2, and 8 and 0.

## Matching Dot and Number Cards (8 minutes)

Materials: (S) Teen number and dot cards for each pair of students (pictured to the right)

- T: Put your number cards in order from smallest to greatest.
- T: Match each number card to a dot card.
- T: Talk to your partner. What do you notice about your dot cards and your number cards?
- S: They all have ten dots. → They all have a one that shows the ten. → They all have an extra dot that tells how many extra ones weren't part of the ten ones. → All the dot cards have two parts and the numbers have two numbers. → Yeah, one of the numbers is one of the parts of the dots.



## Concept Development (30 minutes)

Materials: (S) Picture problem and word problem for each child (shown below), personal white board with number bond template

Note: The following problems are solved using counting and the students knowledge of decomposing and composing teen numbers. Although addition sentences are included in the students' solutions, in this instance, they are another record of the decomposition or the composition of the total that the student counted to find rather than a means of solving the problem. Note that the problems do not ask "How many?" or "How many in all?"

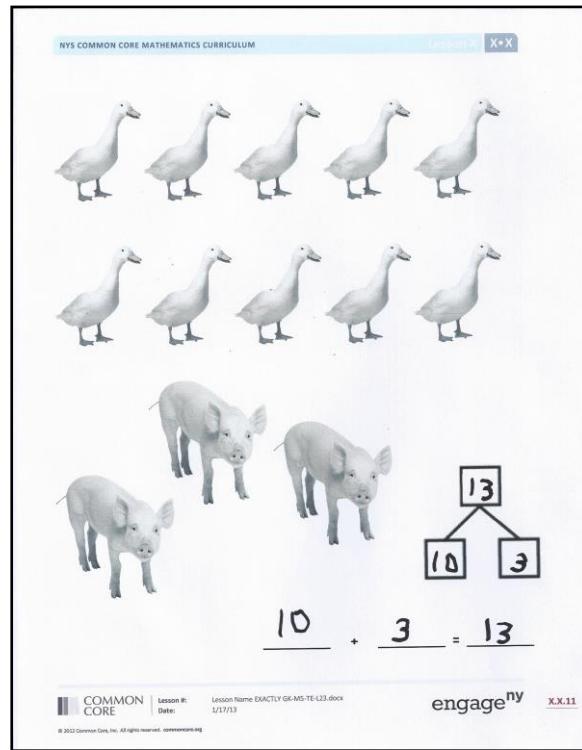
- T: (Show 12 pieces of red construction paper in one line, perhaps taped to the board.) Count with me.
- S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.
- T: Draw and show the 12 papers as 10 ones and some ones.
- S: Should we draw a number bond?
- T: You can draw a picture and make a number bond.
- S: Can we write a number sentence?
- T: That is another good way to show what twelve is made of.
- T: (After working.) Share with your partner how you showed 10 red papers and some more papers.
- T: What parts did you break 12 into?
- S: 10 and 2.
- T: What number sentence did you use to show that?

### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Support English language learners' math talk by providing them with sentence frames, such as:

- I see \_\_\_\_ (number) \_\_\_\_ (unit).
- I see \_\_\_\_ (number) \_\_\_\_ (unit).
- I see \_\_\_\_ (number) \_\_\_\_ (unit) in all.

- S:  $12 = 10 + 2$ .
- T: Yes, 12 is 10 ones and 2 ones.
- T: (Referring back to the red papers on the board.) What can I do to show with my papers on the board that we made two parts?
- S: You could put space between the 10 ones and 2 ones to see the parts more easily.
- T: Okay, I'll do that. Yes, now we can see that 12 is 10 and 2.
- T: Let's do a different problem at a farm. (Pass out the picture problem.) Look at the picture with your partner. Talk about what you see.
- S: (After talking.) There are 10 geese and 3 pigs.
- T: It's easy to see the parts so let's put them together to find how many animals there are.
- T: Work with your partner to show ways to put those parts together.
- T: (Pause while students work.) What are some of the ways you put the two parts together?
- S: We showed a number bond. → We showed an addition sentence. → We got our Hide Zero cards.
- T: When you put the parts together, what was the total of your bond or your number sentence?
- S: 13!
- T: What number sentence did you use to show that?
- S:  $10 + 3 = 13$ .
- T: Yes that is how I think of it when I'm putting parts together. When I'm taking them apart I say it this way,  $13 = 10 + 3$ . Talk to your partner about why you think I do that.
- S: One way starts with the big number. → When we put the ducks and the pigs together we started with the parts. → Like with the animals we could see the parts really easily so we wrote those first,  $10 + 3 = 13$ . → It's different with the red papers. → Yeah, like with the red papers, we counted all the papers first and then separated them,  $12 = 10 + 2$ . → Yeah, it was hard to see the groups because they were all the same color and in one line.
- T: I showed the papers like this,  $12 = 10 + 2$  and the animals like this  $10 + 3 = 13$ . Talk to your partner about why.



#### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Scaffold the lesson for students are below grade level by asking them to model with red and blue cubes before expecting them to model with a drawing.

S: The papers were all one color so we had to find the 10 hiding so we started with counting all the papers. → Yeah, with the animals I counted the pigs first and then the geese.

T: So with the animals you thought about the parts first and the papers you thought about the total first?

S: Yeah.

### Problem Set (7 minutes)

Students should do their personal best to complete the Problem Set within the allotted 7 minutes.

Read the stories to them as they work. Because this Problem Set requires reading it is a good idea to group students by performance level so that you can tell the situations to the students in their small groups.

### Student Debrief (8 minutes)

**Lesson Objective:** Reason about and represent situations, decomposing teen numbers into 10 ones and some ones, and composing 10 ones and some ones into a teen number.

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, taking turns reading the numbers forward and back. 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 the students if they started drawing the parts first or the total first in the story of Robin's apples? the toy trucks? the popcorn bags?

|   |
|---|
| <p>Name <u>Ben</u> Date _____</p> <p>1. Robin saw 5 apples in a bag and 10 apples in a bowl. Draw a picture to show how many apples there are.</p> <p>2. Write a number bond and an addition sentence to match the picture of the apples.</p> <p><math display="block">\begin{array}{c} 15 \\ \swarrow \quad \searrow \\ 10 \quad 5 \end{array}</math></p> <p><math>5 + 10 = 15</math></p> <p>3. Sam has 13 toy trucks. Draw and show the trucks as 10 ones and some ones.</p> <p>4. Write a number bond and an addition sentence to match your story.</p> <p><math display="block">\begin{array}{c} 13 \\ \swarrow \quad \searrow \\ 10 \quad 3 \end{array}</math></p> <p><math>13 = 10 + 3</math></p> <p>5. Our class has 16 bags of popcorn. Draw and show the popcorn bags as 10 ones and some ones.</p> <p>6. Write a number bond and an addition sentence to match your story.</p> <p><math display="block">\begin{array}{c} 16 \\ \swarrow \quad \searrow \\ 10 \quad 6 \end{array}</math></p> <p><math>16 = 10 + 6</math></p> |
|---|

**MP.2**

- Ask students to explain how their drawing relates to the number bond they wrote.
- Ask students to explain how the number sentence relates to the number bond and to the situation.
- Ask the students to show how they wrote the number sentence for each situation and whether they started the sentence with the parts or the total. Invite them to share their thinking about why they chose their particular number sentence.

**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.



Lesson 23:

Reason about and represent situations, decomposing teen numbers into 10 ones and some ones, and composing 10 ones and some ones into a teen number.

Date:

11/14/13

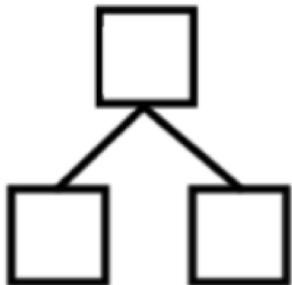
**5.E.34**

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Robin saw 5 apples in a bag and 10 apples in a bowl. Draw a picture to show how many apples there are.

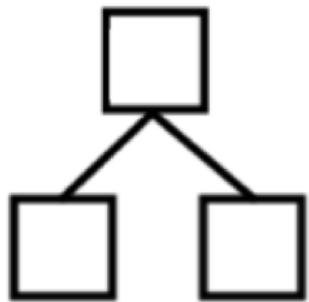
2. Write a number bond and an addition sentence to match your picture.



\_\_\_\_\_

3. Sam has 13 toy trucks. Draw and show the trucks as 10 ones and some ones.

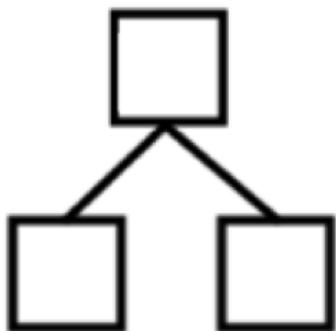
4. Write a number bond and an addition sentence to match your picture.



\_\_\_\_\_

5. Our class has 16 bags of popcorn. Draw and show the popcorn bags as 10 ones and some ones.

6. Write a number bond and an addition sentence to match your picture.



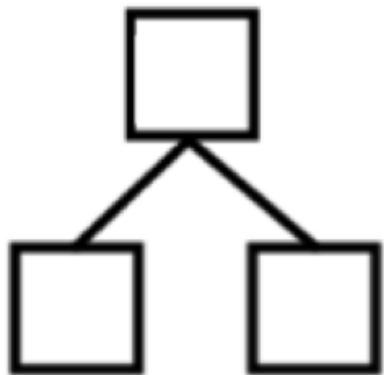
\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_

1. There are 12 balls. Draw and show the balls as 10 ones and some ones.

2. Write a number bond about your picture.



3. Write an addition sentence that tells about your number bond.

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Name \_\_\_\_\_

Date \_\_\_\_\_

1. Bob bought 7 sprinkle donuts and 10 chocolate donuts. Draw and show all Bob's donuts.



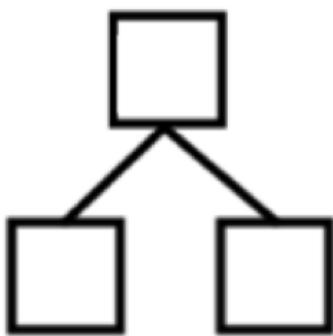
2. Write an addition sentence that tells about the donuts.

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3. Fill in the number bond that tells about the donuts.



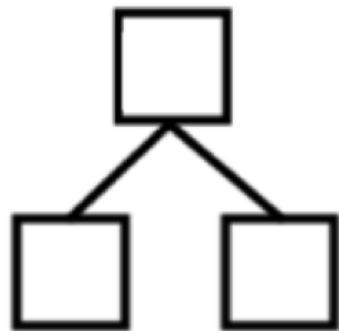
4. Fran has 17 baseball cards. Show Fran's baseball cards as 10 ones and some ones.

5. Write an addition sentence and a number bond that tell about the baseball cards.

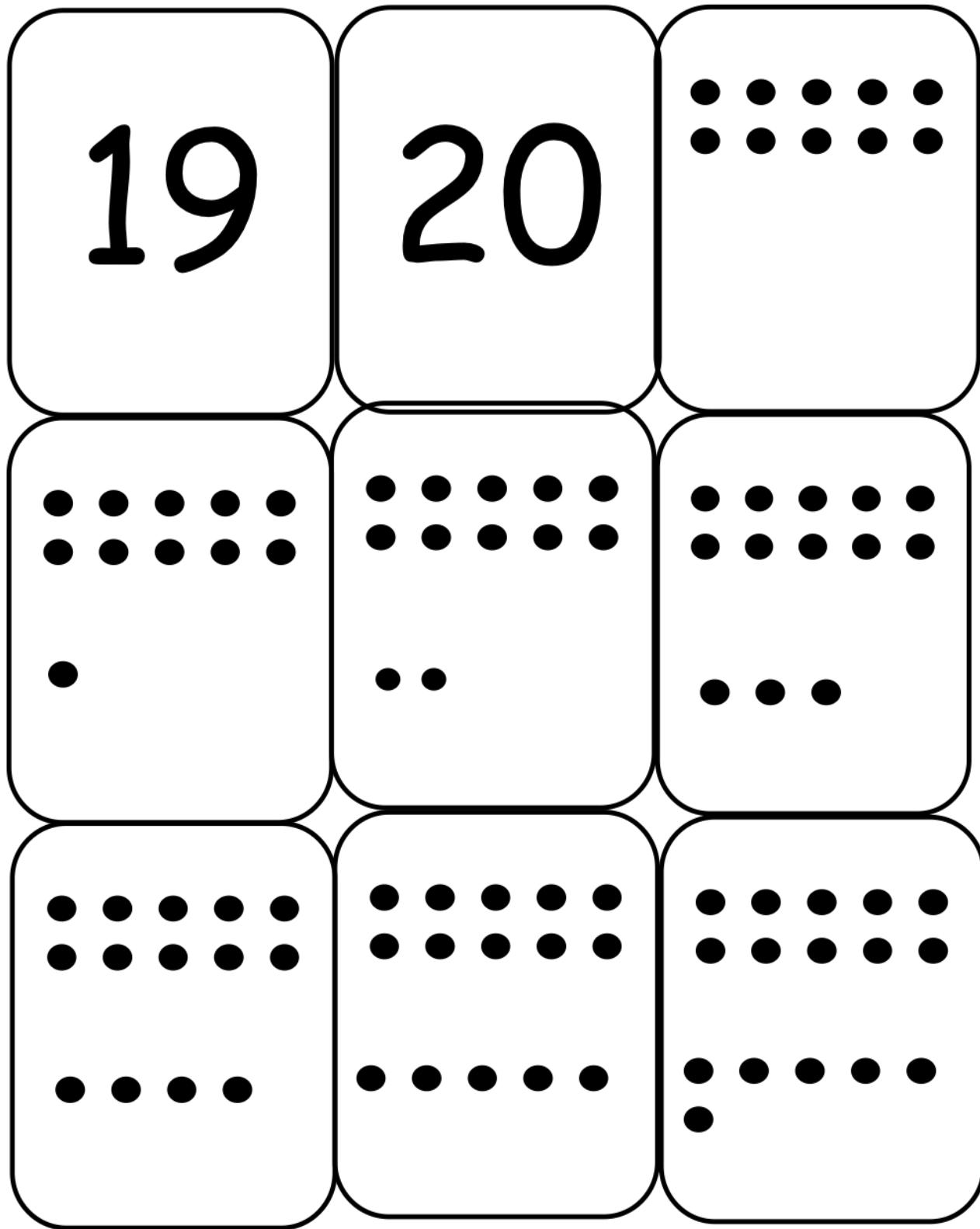
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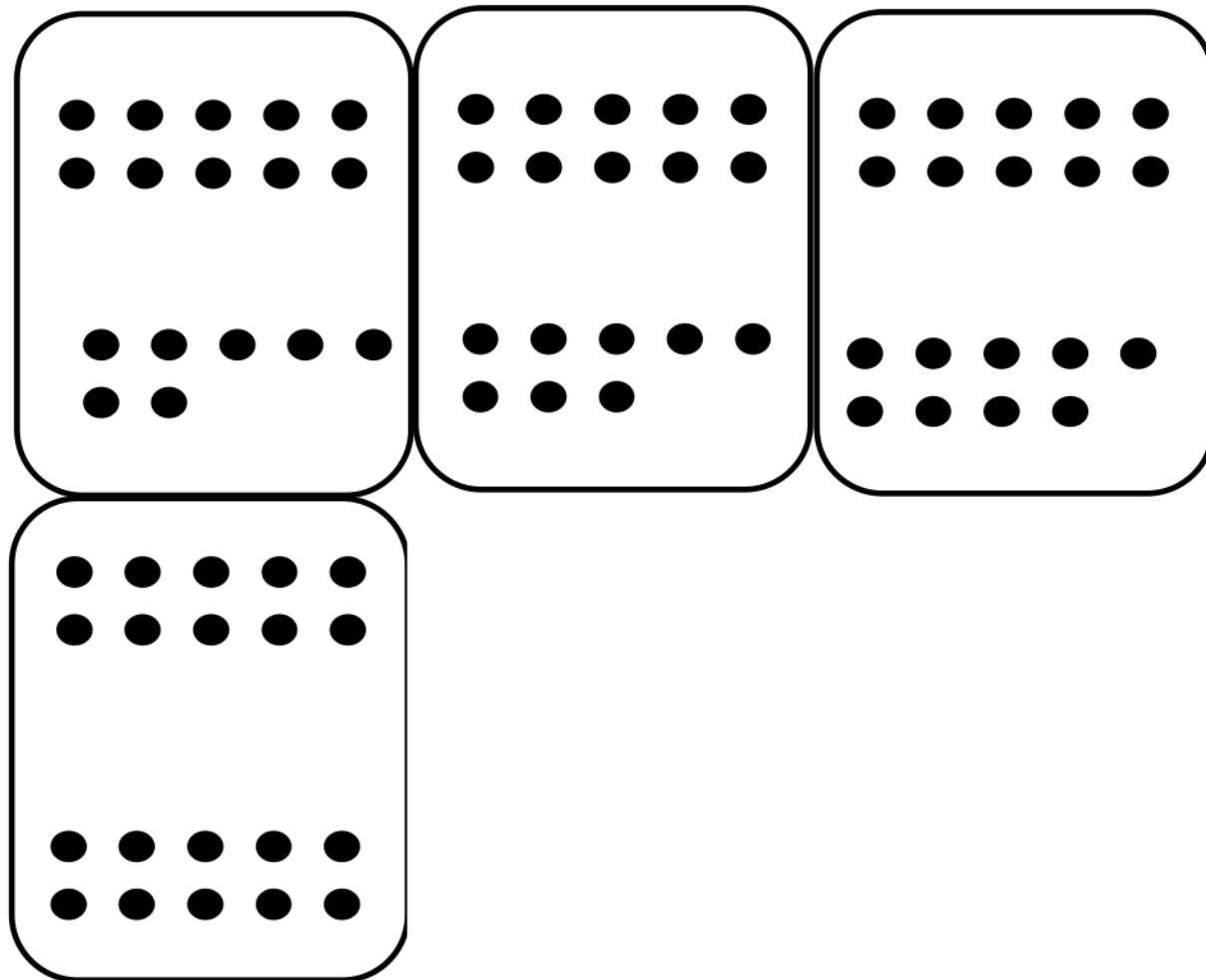
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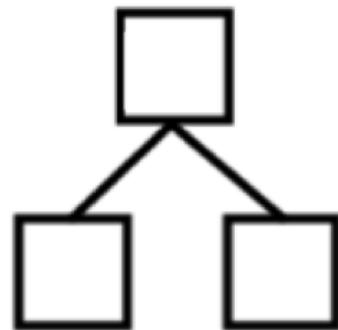
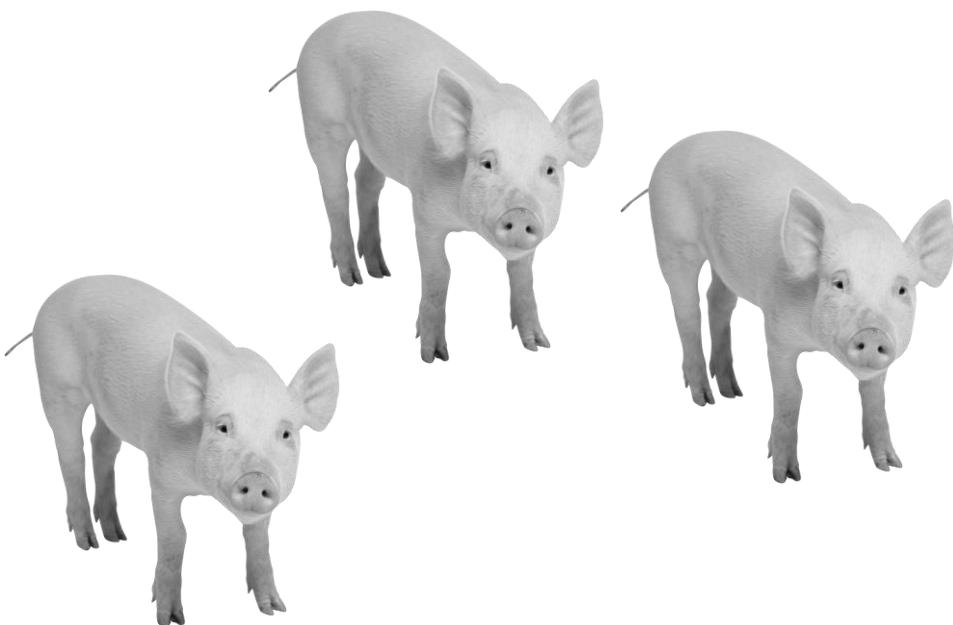
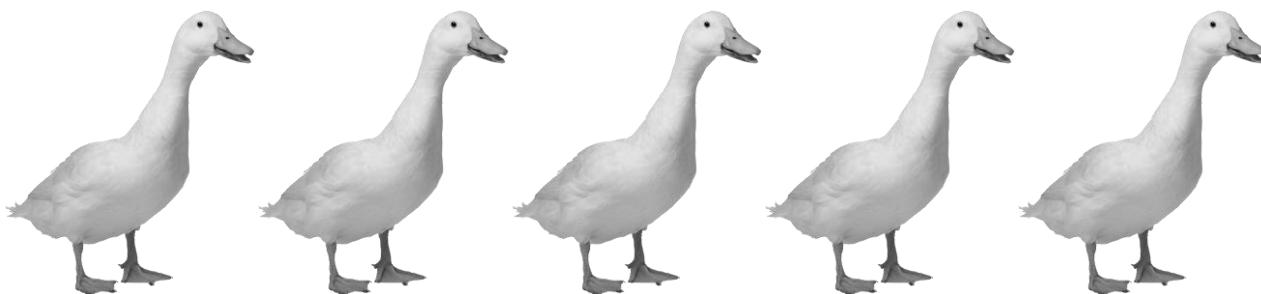
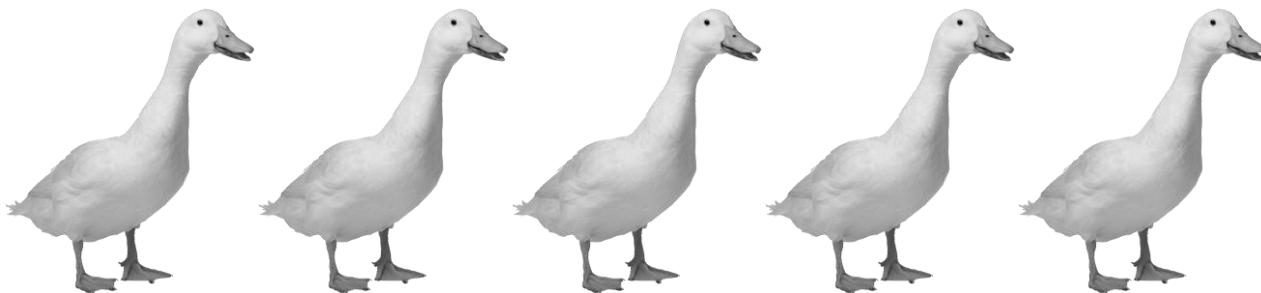
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**10****11****12****13****14****15****16****17****18**







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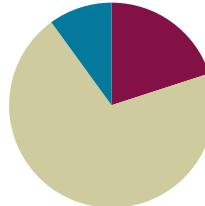
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## Lesson 24

**Objective:** Culminating Task—Represent teen number decompositions in various ways.

### Suggested Lesson Structure

|                     |                     |
|---------------------|---------------------|
| Fluency Practice    | (10 minutes)        |
| Concept Development | (35 minutes)        |
| Student Debrief     | (5 minutes)         |
| <b>Total Time</b>   | <b>(50 minutes)</b> |



### Fluency Practice (10 minutes)

- Help the Frog Catch the Fly **K.CC.4C** (4 minutes)
- Number Bond Hopping Card Games **K.CC.1** (6 minutes)

### Help the Frog Catch the Fly (4 minutes)

T: (Project a pictorial growth chart 10–20 on the board. A fly is on the top step (20). A lily pad is on the bottom step (10). Hold a frog puppet (popsicle stick with a frog picture) on the 10. What number is froggy on now?)

S: 10.

T: Can you help froggy get the fly?

S: Yes.

T: Tell froggy what number is 1 more.

S: 1 more is 11.

T: (Make the frog puppet jump to the next stair.) It's working! What number is he on now?

S: 11.

T: Tell him 1 more.

S: 11. 1 more is 12.

T: (Frog jumps)

Continue to 20.

Variations: 1 more/2 more. Froggy wants to go back home – 1 less/2 less. Consider adding a kinesthetic component—students crouch down or stand taller to reflect the number.



Lesson 24:

Culminating Task— Represent teen number decompositions in various ways.

Date:

11/14/13

## Number Bond Hopping Card Game (6 minutes)

Materials: (S) Teen number and dot cards and record sheet, "Rabbit and Froggy's Matching Race"

Complete directions for this game are located in the Homework component of this lesson.

## Concept Development (35 minutes)

Materials: (S) 10 bags each with a different teen number of objects inside. Materials for each station:  
2 hand cards, Hide Zero cards, personal Rekenrek, ten-frame cards, 20 centimeter cubes, 20 sticks, 20 beans, 1 small paper plate, 20 linking cubes, blank paper, number bond template, etc.

Introduction: 3 minutes

Creating exhibits: 32 minutes

### Set Up

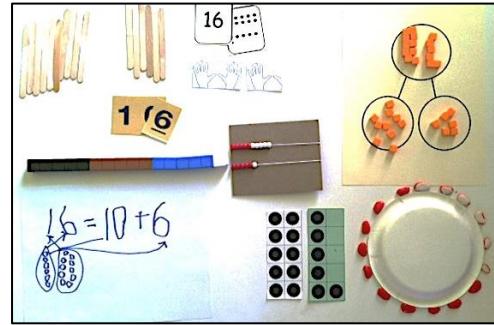
Unbeknownst to the students, station 1 has a bag with 11 cubes, station 2 has a bag with 12 cubes, up to a bag with 20 cubes at Station 10. Assign students with a partner who is more or less at the same performance level. Put higher level students at the stations with 16–20 cubes. Direct each pair of students to one of the stations.

T: Open your mystery bag and count how many objects are inside. Show this number in different ways using the materials available to you at your station.

T: You are going to create an exhibit showing your number in as many ways as you can.

T: The ways you must show your number are include:

- A number bond
- Hide Zero cards
- Rekenrek
- Addition sentence
- Linking cubes



T: Once you have finished the "have to's," you can show other ways, too. You will have 20 minutes. At your table are different materials to help you. You do not have to use them all. You may also use paper and pencil.

This culminating lesson is a part of the kindergarten assessment system. As you circulate, use a recording sheet to document what each student does. What representations does the student choose? What skills are obvious? Which materials does he avoid? Which does he gravitate to immediately? What words is the student using when talking about his teen number.

Use a camera or your cell phone to take a picture of the students' work for their portfolio.

- T: (After 20 minutes.) Now we are going to take a tour to see your friends' creations. When I give the signal, move to the next station.
- T: Think about what you are seeing at each station. Point to the different ways your friends have shown their number. Talk about each one. What makes it special? (Students spend a little less than 1 minute at each station.)

### Student Debrief (5 minutes)

**Lesson Objective:** Culminating Task— Represent teen number decompositions in various ways.

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

The following is a suggested list of questions to invite reflection and active processing of the total lesson experience. Use those that resonate for you as you consider what will best support your students' ability to articulate the focus of the lesson.

- What are some different ways you saw the teen number represented?
- S: Number bonds. → Piles of 10 ones and some more ones. → In circles. → In arrays.  
→ In rows. → With hand cards. → With linking cubes in one long line. → In towers. → In addition sentences. → In story problems. → In pictures. → With Hide Zero cards. → On our Rekenrek.
- Which of these different ways do you feel helps you to understand your teen numbers the most? Why?
- How is a number bond different from and the same as an addition sentence?
- How is a pile of 10 sticks and some more sticks different and the same as the number shown with ten-frame cards?
- What did you notice as you went around the room? How did the exhibits vary?

Close the experience by letting the students know that by understanding their teen numbers, they will understand all the numbers better as they move on to Grade 1.

### Exit Ticket (3 minutes)

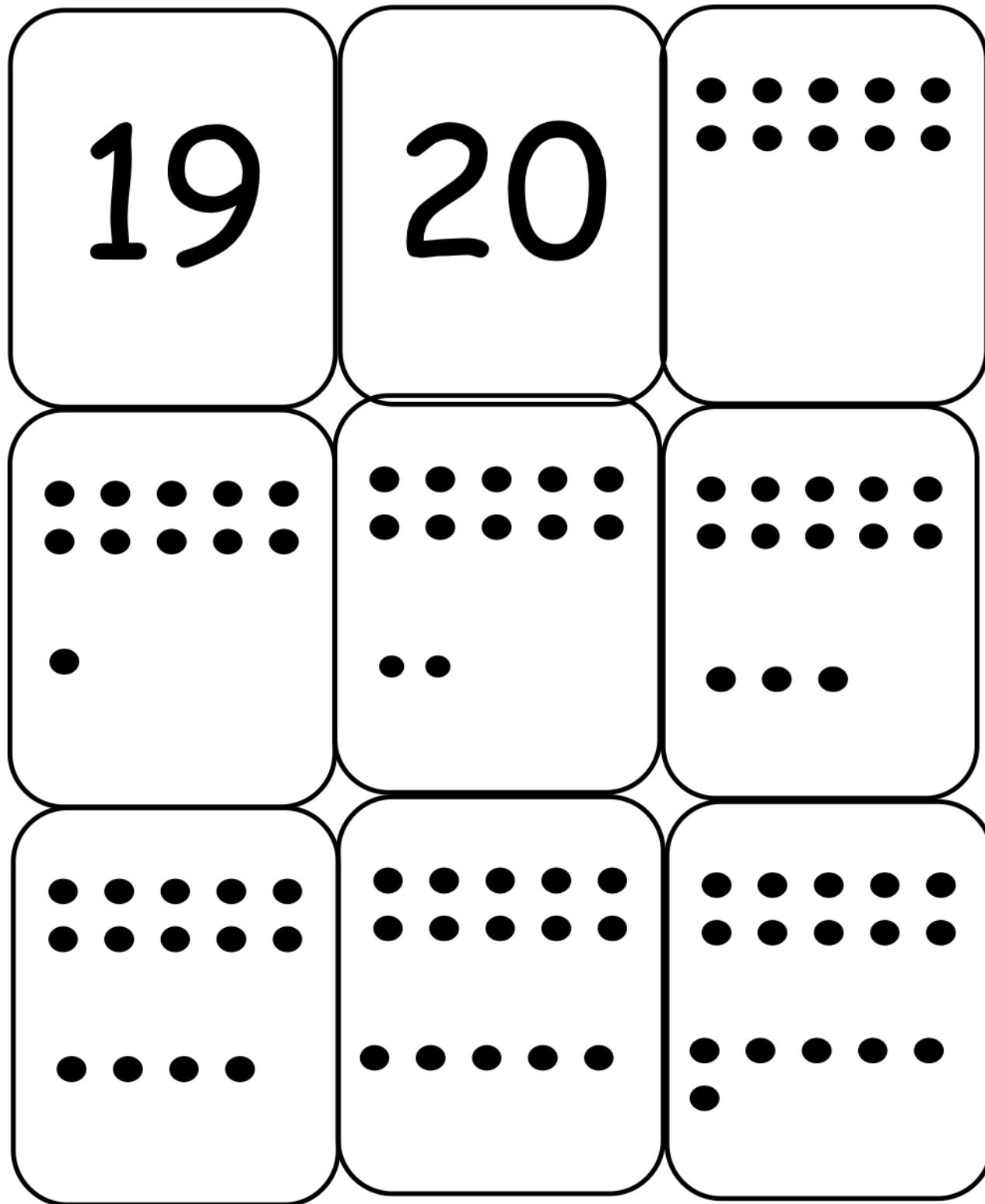
Rather than having an exit ticket for this lesson, the teacher is encouraged to record observations as students work with their partner as described in the closing of the Concept Development section of this lessons.

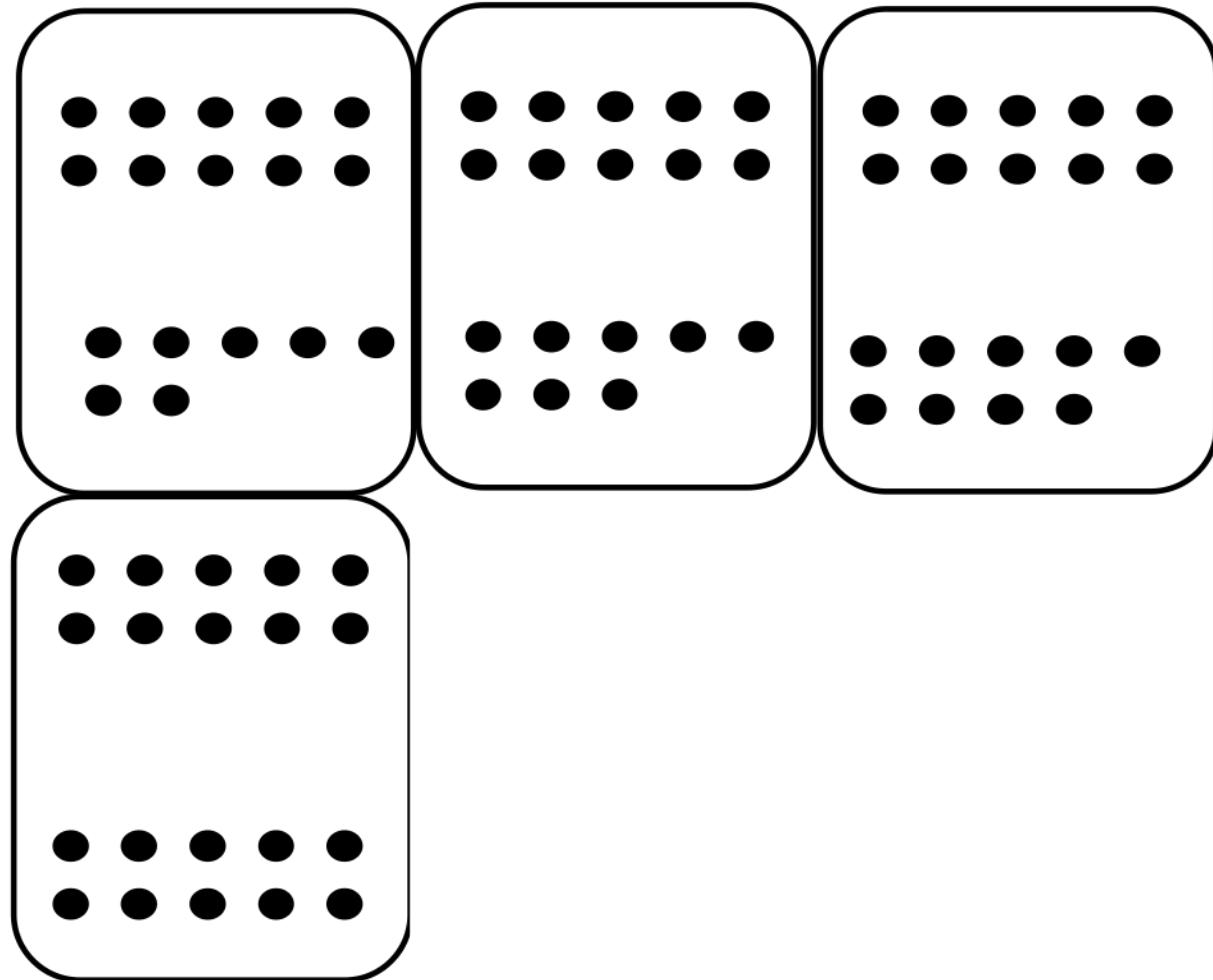


#### NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Challenge students who are above grade level with "what if" questions such as, "What if you changed the bigger part to 9 instead of 10? How would that change your work?" and "What if you changed the bigger part to 11 instead of 10? How would that change your work?"

**10****11****12****13****14****15****16****17****18**

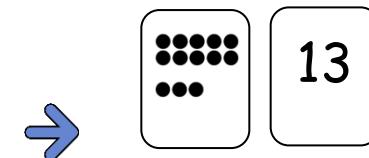




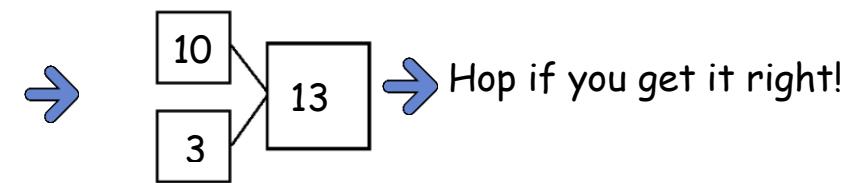
### Rabbit and Froggy's Matching Race

**Directions:** Play "Rabbit and Froggy's Matching Race" with a friend, relative or parent to help your animal reach its food first!

- Put your "Teen Number and Dot" cards face down in rows.



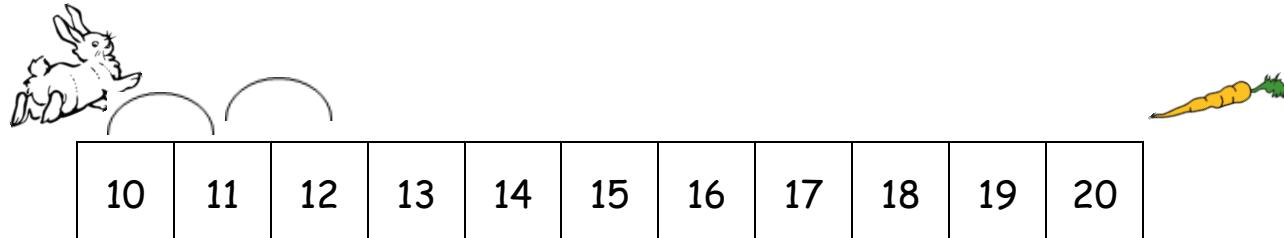
- Flip to find 2 cards that match.



- Write a number bond to match.



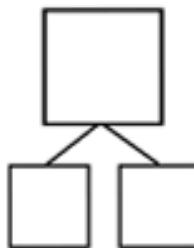
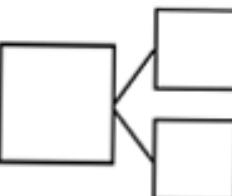
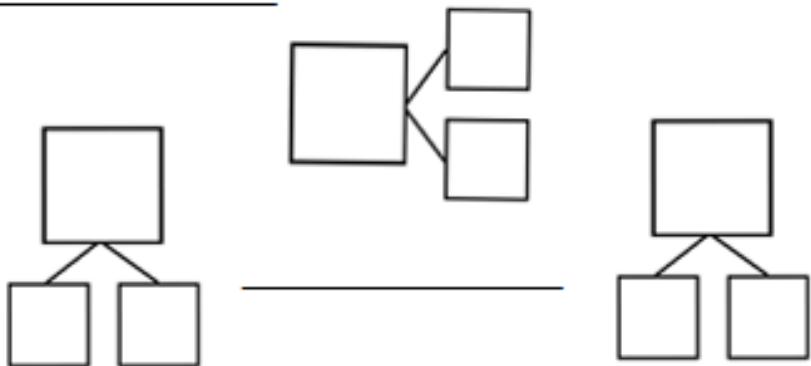
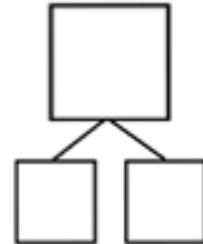
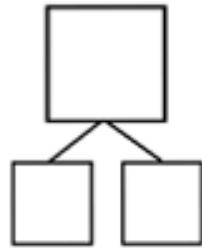
- Write a number sentence .



Player 1: Player 1: \_\_\_\_\_



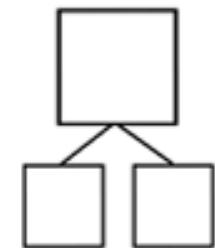
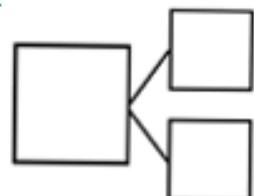
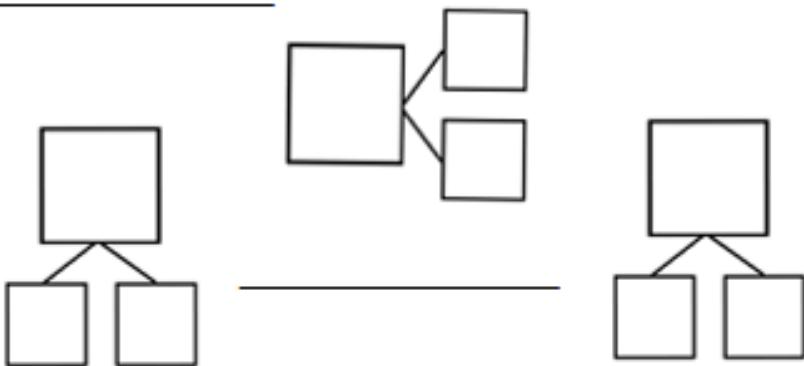
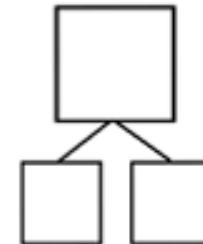
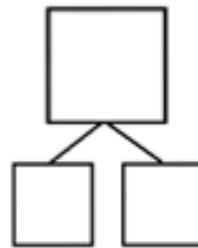
|    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----|----|----|----|----|----|----|----|----|----|----|



Player 2: Player 2: \_\_\_\_\_



|    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----|----|----|----|----|----|----|----|----|----|----|



**Kindergarten Mid-Module 5 Assessment (Administer after Topic C)****Kindergarten End-of-Module 5 Assessment (Administer after Topic E)**

Assessment time is a critically important component of the student–teacher relationship. It is especially important in the early grades to establish a positive and collaborative attitude when analyzing progress. Sit next to the student rather than opposite, and support the student in understanding the benefits of sharing and examining her level of mastery.

Please use the specific language of the assessment and, when possible, translate for non-English speakers (this is a math rather than a language assessment). If a student is unresponsive, wait about 15 seconds for a response. Record the student's results in two ways: (1) the narrative documentation after each topic set, and (2) the overall score per topic using A Progression Toward Mastery. Use a stopwatch to document the elapsed time for each response.

Within each assessment, there is a set of problems targeting each topic. Each set is comprised of three or four related questions. Document what the student did and said in the narrative, and use the rubric for the overall score for each set.

If the student is unable to perform any part of the set, her score cannot exceed Step 3. However, if the student is unable to use her words to tell what she did, do not count that against her quantitatively. Be aware of the difference between a non-native English speaker's and a native English speaker's ability to articulate something. If the student asks for or needs a hint or significant support, provide either, but the score is automatically lowered. This ensures that the assessment provides a true picture of what a student can do independently.

If a student scores at Step 1 or 2, repeat that topic set again at two-week intervals, noting the date of the reassessment in the space at the top of the student's record sheet. Document progress on this one form. If the student is very delayed in her response but completes it, reassess to see if there is a change in the time elapsed.

House the assessments in a three-ring binder or student portfolio. By the end of the year, there will be 10 assessments for each student. Modules 1, 3, 4, and 5 have two assessments each whereas Modules 2 and 6 only have one. Use the Class Record Sheet following the rubric for an easy reference look at students' strengths and weaknesses.

These assessments can be valuable for daily planning, parent conferences, and first grade teachers preparing to receive these students.

Student Name \_\_\_\_\_

|         | Date 1 | Date 2 | Date 3 |
|---------|--------|--------|--------|
| Topic A |        |        |        |
| Topic B |        |        |        |
| Topic C |        |        |        |

**Topic A: Count 10 Ones and Some Ones**

Rubric Score \_\_\_\_\_ Time Elapsed \_\_\_\_\_

Materials: (S) 19 loose straws (or another set of objects in the classroom)

- T: Count 10 straws into a pile. Whisper while you count so I can hear you.
- T: Count 6 more straws into a different pile.
- T: Count 10 straws and 6 more straws the Say Ten way. (Pause.) How many straws do you have? (If the student says the number the Say Ten way, ask them to also say it the regular way.)

|                          |                           |
|--------------------------|---------------------------|
| What did the student do? | What did the student say? |
|                          |                           |

**Topic B: Compose Numbers 11–20 from 10 Ones and Some Ones; Represent and Write Teen Numbers**

Rubric Score \_\_\_\_\_ Time Elapsed \_\_\_\_\_

Materials: (S) 19 cubes, work mat, marker, Hide Zero cards

- T: (Show the numeral 13.) Move this many cubes onto your work mat.
- T: Use the Hide Zero cards to show the number of cubes on your work mat.
- T: Hand me the cubes that the '1' is telling us about. (Point to the 1 of 13 on the numeral 13.)
- T: (Put 3 more cubes.) This is 16 cubes. Please write the number 16 on your work mat.

|                          |                           |
|--------------------------|---------------------------|
| What did the student do? | What did the student say? |
|                          |                           |

**Topic C: Decompose Numbers 11–20, and Count to Answer “How Many?” Questions in Varied Configurations**

Rubric Score \_\_\_\_\_ Time Elapsed \_\_\_\_\_

Materials: (S) 19 cubes

T: (Set out 15 cubes in a scattered configuration.) Count 12 cubes into a straight line. (Pause.) How many cubes are there the counting the regular way? The Say Ten way?

T: Move the cubes into 2 rows.

- How many cubes are there? (Assessing for conservation.)
- Please show me how you count these cubes that are now in rows.

T: Move the cubes into a circle.

- How many cubes are there? (Assessing for conservation.)
- Please show me how to count these cubes that are now in a circle.

T: Put one more cube in your circle. How many cubes do you have now?

| What did the student do? | What did the student say? |
|--------------------------|---------------------------|
|                          |                           |

**Mid-Module Assessment Task  
Standards Addressed****Topics A–C****Know number names and the count sequence.**

- K.CC.1** Count to 100 by ones and by tens.
- K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).

**Count to tell the number of objects**

- K.CC.4** Understand the relationship between numbers and quantities: connect counting to cardinality.
- Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  - Understand that each successive number name refers to a quantity that is one larger.
- K.CC.5** Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

**Work with numbers 11–19 to gain foundations for place value.**

- K.NBT.1** Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g. by using objects or drawings, and record each composition or decomposition by a drawing or equation...

**Evaluating Student Learning Outcomes**

A Progression Toward Mastery is provided to describe and quantify steps that illuminate the gradually increasing understandings that students develop on their way to proficiency. In this chart, this progress is presented from left (Step 1) to right (Step 4). The learning goal for each student is to achieve Step 4 mastery. These steps are meant to help teachers and students identify and celebrate what the student can do now while pointing the way toward what he or she needs to work on next.

| A Progression Toward Mastery                          |  |  |  |  |
|---|--|--|--|--|
| Assessment Task Item                                  | STEP 1<br>Little evidence of reasoning without a correct answer.<br><br>(1 point)  | STEP 2<br>Evidence of some reasoning without a correct answer.<br><br>(2 points)   | STEP 3<br>Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.<br><br>(3 points)  | STEP 4<br>Evidence of solid reasoning with a correct answer.<br><br>(4 points)   |
| <b>Topic A</b><br><br><b>K.NBT.1</b><br><b>K.CC.1</b> | The student shows little evidence of counting ability or understanding. Almost non-responsive.   | The student shows evidence of beginning to understand counting beyond 10, but counts the quantity incorrectly (i.e. lacks organization, consistent 1:1 correspondence, etc.).                | The student correctly counts 10 straws into a pile, and then 6 straws, but is unable to count to 16.   | The student correctly: <ul style="list-style-type: none"><li>▪ Counts 10 straws into a pile, and then 6 straws.</li><li>▪ Counts from 1 to 16.</li><li>▪ Counts the Say Ten way starting with the group of 10, "...ten one, ten two, ten three, ten four..." all the way up to 16.</li></ul> |
| <b>Topic B</b><br><br><b>K.NBT.1</b><br><b>K.CC.3</b> | The student shows little evidence of understanding how to represent a teen number and/or use Hide Zero cards.<br><br>The student writes the number 16 incorrectly. | The student shows a beginning understanding of representing teen numbers, and using Hide Zero cards, but is unable to answer correctly.<br><br>The student writes the number 16 incorrectly. | The student correctly counts 13 cubes, and accurately uses the Hide Zero cards, but produces an incorrect quantity to represent the "1" in 13.<br><br>Or, the student identifies a group of 10 as representing the "1" in 13, but cannot use the Hide Zero cards accurately.<br><br>The student writes the numeral 16 correctly. | The student correctly: <ul style="list-style-type: none"><li>▪ Counts 13 cubes and selects both the 10 and 3 Hide Zero cards to accurately make 13.</li><li>▪ Identifies a group of 10 as being representative of the "1" in the numeral 13.</li><li>▪ Writes the numeral 16.</li></ul>      |



| A Progression Toward Mastery (continued)  |  |  |   |   |
|---|--|--|---|---|
| Assessment Task Item  | STEP 1<br>Little evidence of reasoning without a correct answer.<br><br>(1 point)                      | STEP 2<br>Evidence of some reasoning without a correct answer.<br><br>(2 points)   | STEP 3<br>Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.<br><br>(3 points)   | STEP 4<br>Evidence of solid reasoning with a correct answer.<br><br>(4 points)  |
| <b>Topic C</b><br><br><b>K.CC.4b</b><br><b>K.CC.4c</b><br><b>K.CC.5</b><br><b>K.NBT.1</b> | The student shows little evidence of understanding how to make or count objects in arrays and circles. | The student shows evidence of beginning to understand counting arrays and circles, but is unable to do so accurately and consistently. | The student arranges and counts each array and circle correctly, but cannot add one more and identify the new quantity.<br><br>The student recounts to know that it is 12. Or, the student adds one more and identifies the new quantity, but struggles with one or more of the counting array tasks. | The student correctly: <ul style="list-style-type: none"><li>▪ Counts 12 cubes</li><li>▪ Arranges and counts each array and knows the total is 12 without recounting.</li><li>▪ Arranges and counts in a circle and knows the total is 12 without recounting.</li><li>▪ Adds 1 more to the quantity and determines the new quantity with or without recounting.</li></ul> |

| Class Record Sheet of Rubric Scores: Module 5 |   |  |   |             |
|---|---|--|---|-------------|
| Student Names:                                | Topic A:<br>Count 10 Ones and Some Ones | Topic B:<br>Compose Numbers 11–20 from 10 Ones and Some Ones; Represent and Write Teen Numbers | Topic C:<br>Decompose Numbers 11–20, and Count to Answer “How Many?” Questions in Varied Configurations | Next Steps: |
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Student Name \_\_\_\_\_

**Topic D:** Extend the Say Ten and Regular Count Sequence to 100

Rubric Score \_\_\_\_\_ Time Elapsed \_\_\_\_\_

Materials: (T) Ten 10-frame cards representing 10

Set out the ten 10-frame cards.

- T: (Set out two 10-frame cards.) How many dots are on these cards? Touch and count each dot the regular way. Whisper while you count so I can hear you.
- T: Please count the dots from 11 to 20 the Say Ten way.
- T: Please count by 10s to 100 the Say Ten way.
- T: Please count by 10s to 100 the regular way.
- T: Start at 28. Count up by 1s and stop at 32 the regular way. (If the student is unable to this, try 8 through 12, then 18 through 22.)

| What did the student do? | What did the student say? |
|--------------------------|---------------------------|
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**Topic E: Represent and Apply Compositions and Decompositions of Teen Numbers**

Rubric Score \_\_\_\_\_ Time Elapsed \_\_\_\_\_

Materials: (S) 17 centimeter cubes,  $8\frac{1}{2} \times 11$ " number bond template in personal white board, eraser

- T: (Set out 17 cubes.) How many cubes are there? (Note the arrangement in which the student counted. If the student did *not* arrange into a straight line or array, do so for the student.)
- T: Separate 10 cubes into a group.
- T: Write 17 as a number bond on your personal board using 10 ones as one of the parts. (Be sure to have students write the numerals.)
- T: (Write  $17 = \underline{\quad} + \underline{\quad}$ .) Make an addition sentence to match your number bond.
- T: How are your number bond and your the addition sentence the same?

| What did the student do? | What did the student say? |
|--------------------------|---------------------------|
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**End-Module Assessment Task  
Standards Addressed****Topics D–E****Know number names and the count sequence.**

- K.CC.1** Count to 100 by ones and by tens.
- K.CC.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
- K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).

**Count to tell the number of objects.**

- K.CC.4** Understand the relationship between numbers and quantities: connect counting to cardinality.
- Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  - Understand that each successive number name refers to a quantity that is one larger.
- K.CC.5** Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

**Work with numbers 11–19 to gain foundations for place value.**

- K.NBT.1** Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g. by using objects or drawings, and record each composition or decomposition by a drawing or equation, (such as  $18 = 10 + 8$ ); understand that these numbers are composed of ten ones, and one, two, three, four, five, six, seven, eight, or nine ones.

**Evaluating Student Learning Outcomes**

A Progression Toward Mastery is provided to describe and quantify steps that illuminate the gradually increasing understandings that students develop on their way to proficiency. In this chart, this progress is presented from left (Step 1) to right (Step 4). The learning goal for each student is to achieve Step 4 mastery. These steps are meant to help teachers and students identify and celebrate what the student can do now while pointing the way toward what he or she needs to work on next.

| A Progression Toward Mastery                          |  |   |   |  |
|---|--|---|---|--|
| Assessment Task Item                                  | STEP 1<br>Little evidence of reasoning without a correct answer.<br>(1 point)  | STEP 2<br>Evidence of some reasoning without a correct answer.<br>(2 points)  | STEP 3<br>Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.<br>(3 points)   | STEP 4<br>Evidence of solid reasoning with a correct answer.<br>(4 points)   |
| <b>Topic D</b><br><br><b>K.CC.1</b><br><b>K.CC.2</b>  | The student shows little evidence of counting ability or understanding.  | The student shows evidence of beginning to understand counting by 10s and 1s, but skips or repeats numbers often, resulting in an inaccurate count.                           | The student is unable to perform one of the tasks.  | The student correctly: <ul style="list-style-type: none"><li>▪ Counts up and down by 10s using Say Ten and regular ways.</li><li>▪ Counts the dots from 11 to 20.</li><li>▪ Counts from 28 to 32.</li></ul>  |
| <b>Topic E</b><br><br><b>K.CC.5</b><br><b>K.NBT.1</b> | The student shows little evidence of understanding of organized counting, teen numbers, number bonds, and/or addition sentences. | The student shows a beginning understanding of counting into an array or line, representing teen numbers as number bonds and/or addition sentences, but answers inaccurately. | The student correctly counts 17 cubes into an array or line, writes the number bond for 17, but cannot write an accurate equation. Or, the student writes an accurate equation for 17, but cannot write the number bond or count into an array or line. | The student correctly: <ul style="list-style-type: none"><li>▪ Counts 17 cubes into an array or line.</li><li>▪ Separates 10 cubes and correctly writes 17 as the whole and 10 and 7 as the parts of 17.</li><li>▪ Writes an accurate addition sentence, reasonably connects both representations.</li></ul> |

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