Kenmore-Town of Tonawanda UFSD

We educate, prepare, and inspire all students to achieve their highest potential

Grade K Module 5
Parent Handbook

Numbers 10 – 20; Count to 100 by Ones and Tens

This module is a key next step for kindergarten students in understanding place value beyond the numbers 1-10. We will first talk about teen numbers as "10 ones and some ones," and extend that understanding to writing teen numbers. Finally, we will count to 100 by ones and by tens using various strategies.

Another way of showing that 10 ones and 5 more ones make 15, this time with tacos instead of smiley faces! Note the use of the number bond as well.

What Came Before this Module: We made the exciting step of working with number bonds and other strategies to learn beginning addition and subtraction skills.

What Comes After this Module: To wrap up the year, we will return to geometry. We will compose and decompose 2-dimensional shapes and lay the foundation for understanding area.

New Terms and Strategies in this Module:

Counting to 100 in two different ways:
- regular counting by tens: "ten, twenty, thirty", etc.
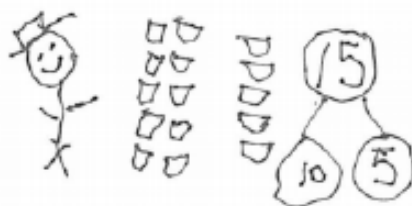- the "Say Ten" way of counting to 100: "1 ten, 2 tens, 3 tens", etc.

Hide Zero Cards - cards used to teach and reinforce place value concepts

10 ones and some ones - a way to talk about teen numbers that emphasizes groups of ten as the basic place value concept

Familiar Terms and Strategies in this Module:

"Say Ten" way of counting - e.g. "ten-one, ten-two, ten-three" instead of "eleven, twelve, thirteen"

Number bonds
Number towers
5-Group
Ten frame
Part/Whole/Total

Key Common Core Standards:

- *Know number names and the count sequence*
    - o Count to 100 by ones and by tens
    - o Count forward beginning from a given number
    - o Write numbers from 0 to 20; Represent a number of objects with a written numeral 0-20
- *Count to tell the number of objects*
    - o Understand the relationship between numbers and quantities; connect counting to cardinality
    - o Count to answer "how many?" questions about as many as 20 things arranged in various ways
- *Work with numbers 11-19 to gain foundations for place value*
    - o Compose and decompose numbers from 11 to 19 into ten ones and some further ones

+ How you can help at home:

- Review and practice counting numbers up to 100, or as high as possible

- Talk about the numbers 11-19 with your student as "10 ones and _____ ones"

- Practice counting by ten in two ways: "ten, twenty, thirty" and "1 ten, 2 tens, 3 tens"

The yellow cards are hide zero cards. Digits are used to "hide the zero" in order to emphasize that, for example, 18 is made from a 10 and 8 ones – and the ten is still there as part of the number!
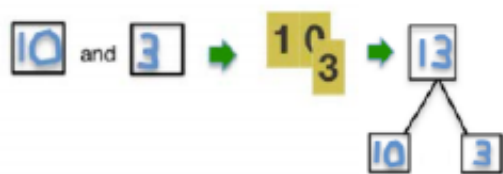
Spotlight on Math Strategies:

Hide Zero Cards

Students will frequently use these cards in the early years of *A Story of Units*.

A Story of Units has several key mathematical strategies that will be used throughout a student's elementary years.

Hide Zero cards are a way of showing that even as we compose and create numbers larger than 10, the 10 is still there, always part of the number.

Thus, we start with the numerals for 10, and cover, or hide, the zero, to make a new number, e.g. 10 and 3 ones. Students' concrete understanding, built up by counting and drawing physical objects, now moves toward a more abstract understanding of how the numbers 11-19 are created. They see the 10, and then the zero covered up to make a new number, but always with the understanding that 10 is a basic building block of that number. Number bonds, as above, are also used to reinforce this new understanding.

Sample Problem from Module 5:
(Example taken from Lesson 10)

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.

Notice how the student first numbered the left hand nails, then started counting again at 1 with the thumb and on to the other hand.

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 1, ten 2, ten 3, ten 4, ten 5, ten 6, ten 7, ten 8, ten 9, 2 tens. 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**).
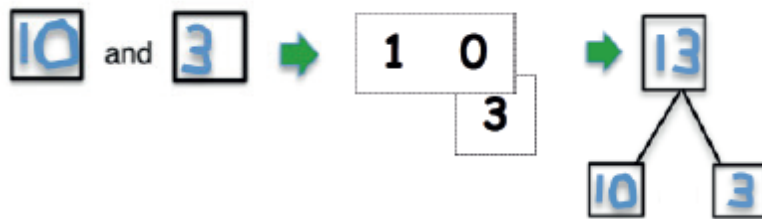

Topic C opens with students making a simple Rekenrek to 20 (pictured below) and modeling numbers thereon. The tens can be seen both as two lines with a color change at the five or two parallel unicolor fives.

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. 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 or conservation as they count quantities arranged in different ways and, as always, use math talk to share their observations (**K.CC.5**). They also come to know each successive teen number as one larger than the previous number (**K.CC.4a**).

Towers   Arrays   Circles

I have 10 ones and 2 ones.
10 and 2 is ___.
12 = 10 + ___.
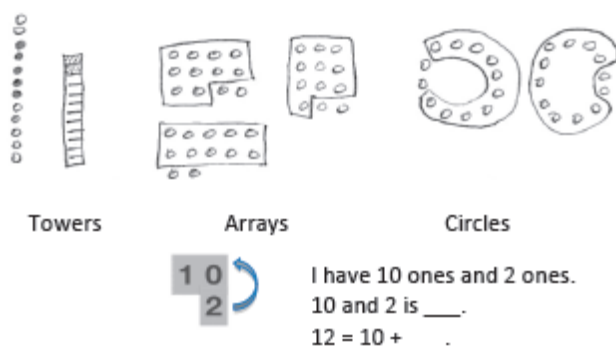
In Topic D, students extend their understanding of counting teen numbers to numbers from 21 to 100. hey first count by tens both the Say Ten way—1 ten, 2 tens, 3 tens, 4 tens, etc.—and the regular way: twenty, thirty, forty, etc. They then count by ones to 100, first within a decade and finally across the decade (**K.CC.1, K.CC.2**). Topic D involves the Grade 1 standard **1.NBT.1** because students also write their numbers from 21 to 100.

The writing of larger numbers has been included because of the range of activities they make possible. The writing of these numbers is not assessed nor 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 + ___ = 13 or 13 = ___ + 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, for example, 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-if-Module Assessment, allowing students to demonstrate skill and understanding using all they have learned throughout the module.
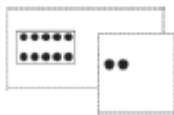
Terminology

New or Recently Introduced Terms

- 10 and __
- 10 ones and some ones
- 10 plus
- Hide Zero cards (called Place Value cards in later grades, pictured to the below)

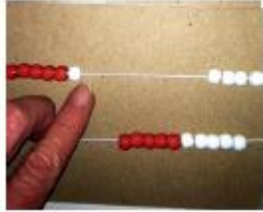Hide Zero card (front)
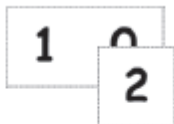
Hide Zero card (back)

- Regular counting by tens to 100 (e.g., ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred)
- 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)
- Teen numbers

Familiar Terms and Symbols

- 10-frame
- 5-group
- Circle 10 ones
- Circular count
- Count 10 ones
- Dot path, empty path, number path
- Linear count
- Number bond
- Number tower
- Part, whole, total
- 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 tens")
- Scatter count

Suggested Tools and Representations

- 50 sticks or straws for each group of 2 students
- Student-made Rekenrek (pictured to the below: 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 (called Place Value cards in later grades)
- Objects to put in the egg carton such as mandarin oranges, plastic eggs, or beans

- Single and double 10-frames
- Linking cubes: ideally 10 of two different colors per student
- Number bond template
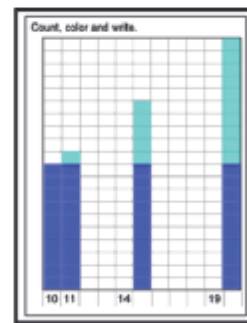
Count 10 Ones and Some Ones

Focus Standards:

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.

Instructional Days Recommended: 5

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 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 1, ten 2, ten 3, ten 4, ten 5, ten 6, ten 7, ten 8, ten 9, 2 tens).

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

Homework Key

Triangles – not circled

Circles – circled

Hearts – circled

Diamonds – circled

Triangles – not circled

Faces – 10 circled, 2 not circled

Suns – circled

Squares – circled

Lightning bolts – not circled

Cylinders – circled

Half-moons – not circled

Triangles – not circled

Circles – circled

Rectangular prisms – circled

Trapezoids – not circled

Hearts – not circled

Ovals – circled

Triangles – not circled

Hearts – circled

Triangles – circled

Homework Sample

Circle 10.

Count the number of times you circled 10 ones. Tell a friend or an adult how many times you circled 10 ones. *I circled 10 ones, 12 times.*

Lesson 2

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

Homework Key
2 more circles drawn
3 more half-moons drawn
1 more heart drawn
5 more faces drawn

Homework Samples
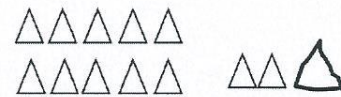
10 ones and 3 ones

Draw more to show the number.
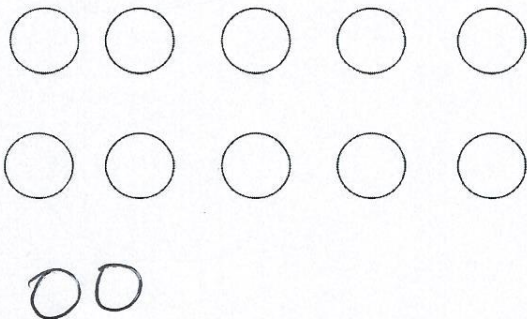
10 ones and 2 ones
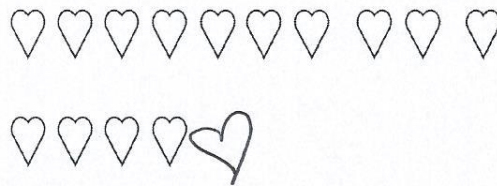
10 ones and 5 ones
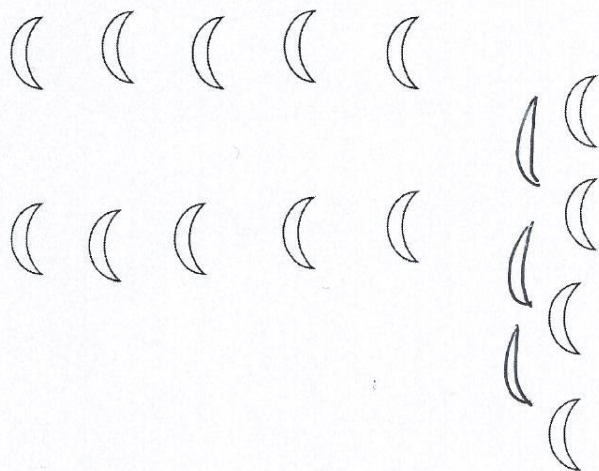
10 ones and 7 ones
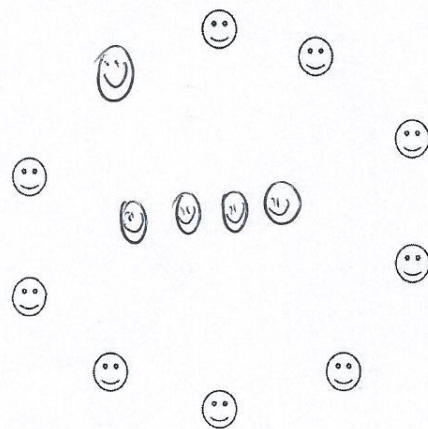
10 ones and 4 ones

Lesson 3

Objective: Count and circle 10 objects within images of 10 to 20 objects, and describe as 10 ones and ___ ones.

Homework Key

10 ducks circled; 2
10 diamonds circled; 10, 8
10 faces circled; 4
10 watering pails circled; 10, 1

Homework Samples
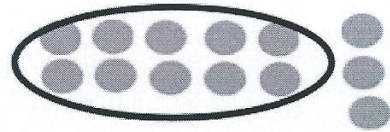
I have 10 ones and 3 ones.

Circle 10 things. Tell how many there are in two parts, 10 ones and some more ones.
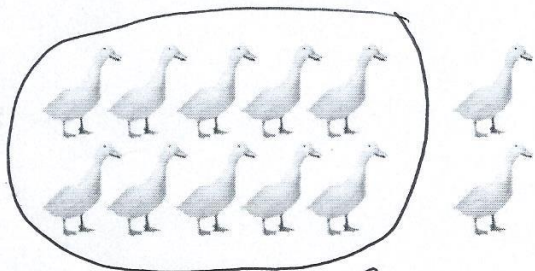
I have 10 ones and 2 ones.
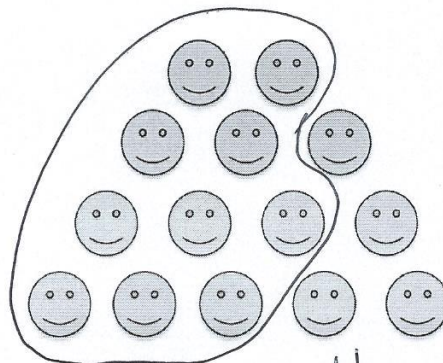
I have 10 ones and 4 ones.
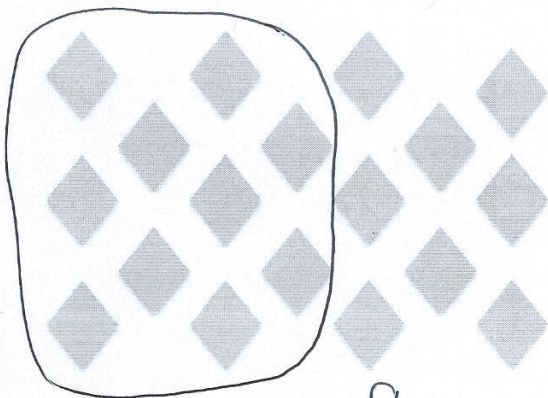
I have 10 ones and 8 ones.
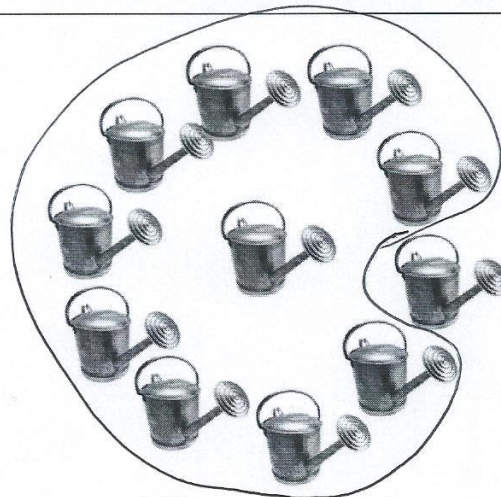
I have 10 ones and 1 ones.

Lesson 4

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

Homework Key
Pictures matched to numbers

Homework Samples

OOOOO   XXX
OOOOO

(10   3)
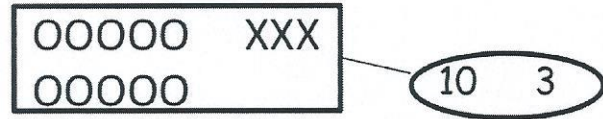
Draw a line to match each picture with the numbers the Say Ten way.

OOOOO   X
OOOOO

(10   1)

OOOOO   XX
OOOOO

(10   6)

OOOOO   XXX
OOOOO

(10   10)

OOOOO   XXXXX
OOOOO   X

(10   2)

OOOOO   XXXXX
OOOOO   XXXXX

(10   3)
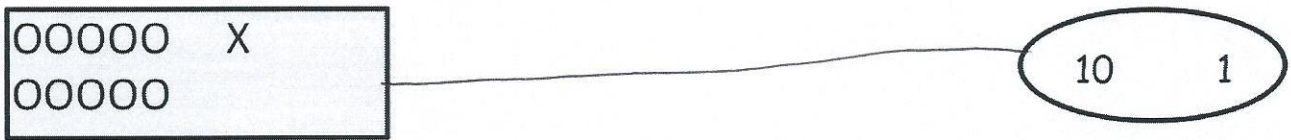
Lesson 5

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

Homework Key
10, 1; 10, 3
10, 4; 10, 6
10, 5; 10, 7
10, 0; 10, 2
10, 8; 10, 10

Homework Samples

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
10 and 1	10 and 2	10 and 3
10 and 4	10 and 5	10 and 6
10 and 5	10 and 6	10 and 7
10 and 0	10 and 1	10 and 2
10 and 8	10 and 9	10 and 10

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

Focus Standards:

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

Instructional Days Recommended: 4

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 7 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.1**). For example, in Lesson 7, 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?" as 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.

*The sample homework responses contained in this manual are intended to provide insight into the skills expected of students and instructional strategies used in Eureka Math.

Lesson 6

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

Homework Key

10 dots, 2 dots; 12
10 dots, 7 dots; 17
10 dots, 9 dots; 19
10 dots, 4 dots; 14

Homework Samples

Write and draw the number. Use your Hide Zero cards to help you.
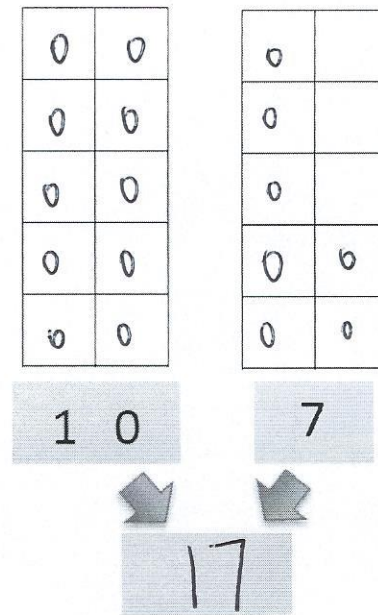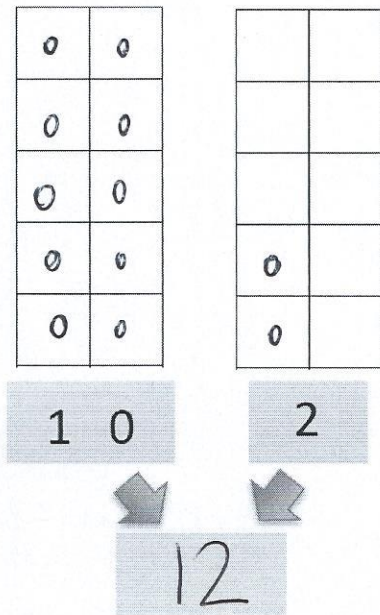
Lesson 7

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

Homework Key

8

7

10, 6

10, 5

14; 10, 4

13; 10, 3

10, 2

10, 1

10; 10, 0

Homework Samples

Look at the Hide Zero cards or the 5-group cards. Use your cards to show the number. Write the number as a number bond.
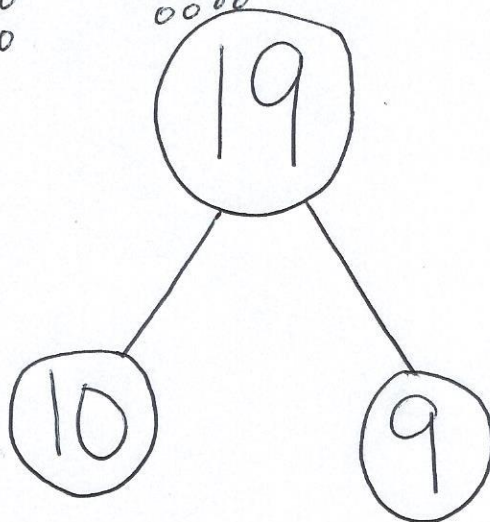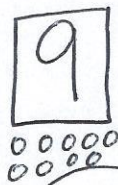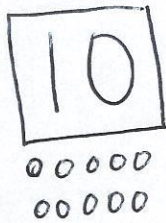
Lesson 8
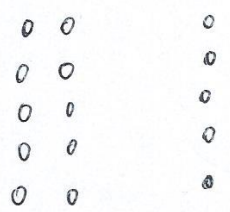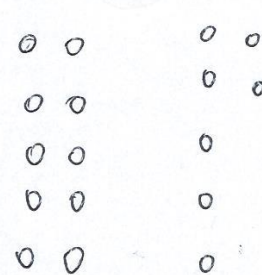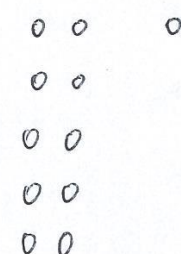
Objective: Model teen numbers with materials from abstract to concrete.

Homework Key

10 dots drawn the 5-group way and 5 more
10 dots drawn the 5-group way and 3 more
10 dots drawn the 5-group way and 7 more
10 dots drawn the 5-group way and 1 more
10 dots drawn the 5-group way and 2 more
10 dots drawn the 5-group way and 6 more
20 dots drawn the 5-group way
10 dots drawn the 5-group way and 4 more

Homework Samples

Use your materials to show each number as 10 ones and some more ones.
Use your 5-groups way of drawing.

1 5

1 3

Ten seven

Ten one

Lesson 9

Objective: Draw teen numbers from abstract to pictorial.

Homework Key

16 objects drawn; 10 circled
20 objects drawn; 2 sets of 10 circled
19 objects drawn; 10 circled
14 objects drawn; 10 circled
12 objects drawn; 10 circled

Homework Samples

For each number, make a drawing that shows that many objects.
Circle 10 ones.
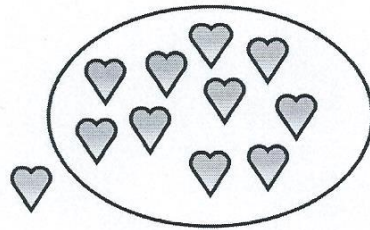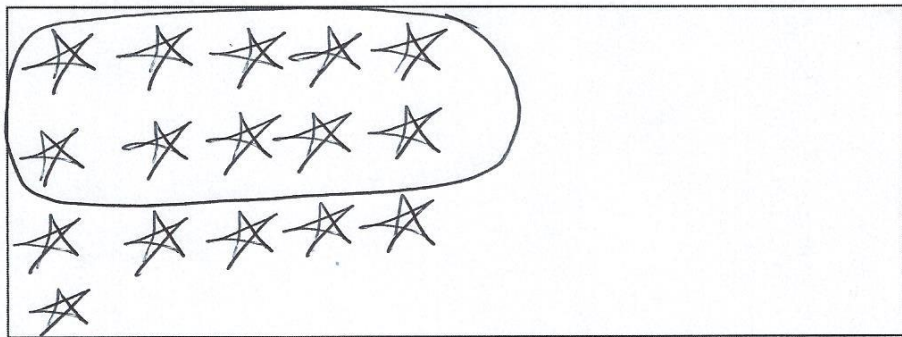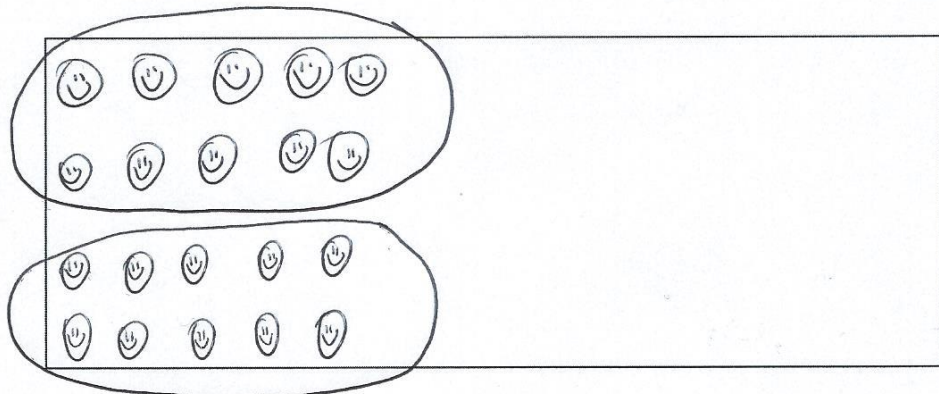
Decompose Numbers 11-20, and Count to Answer "How Many?" Questions in Varied Configurations

Focus Standards:

K.CC.4   Understand the relationship between numbers and quantities; connect counting to cardinality.
b. 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.
c. 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.

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.

Instructional Days Recommended: 4

Topic C opens in Lesson 10 with students building a Rekenrek to 20, which they use to count and model numbers for the balance of the year. They 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 students 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 Problem Set 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**).

The sample homework responses contained in this manual are intended to provide insight into the skills expected of students and instructional strategies used in Eureka Math.

Lesson 10
Objective: Build a Rekenrek to 20.

Homework Key

Number bond showing that 10 and 3 make 13; fingernails and beads colored to match
Number bond showing that 10 and 4 make 14; fingernails and beads colored to match
Number bond showing that 10 and 1 make 11; fingernails and beads colored to match
Number bond showing that 10 and 2 make 12; fingernails and beads colored to match
Number bond showing that 10 and 6 make 16; fingernails and beads colored to match
Number bond showing that 10 and 7 make 17; fingernails and beads colored to match

Homework Samples

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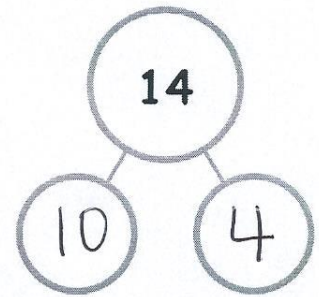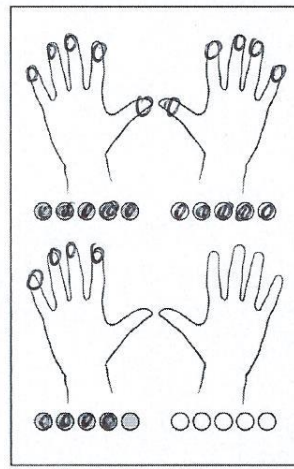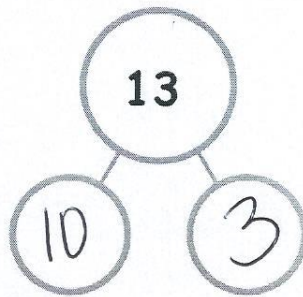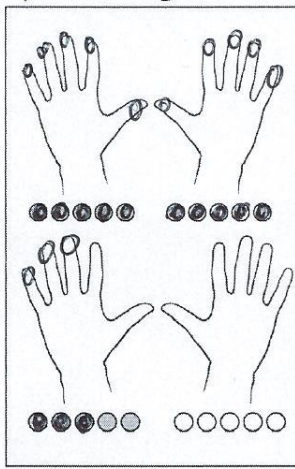
Lesson 11
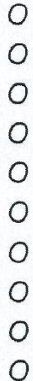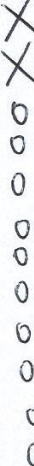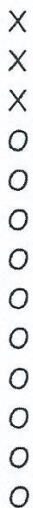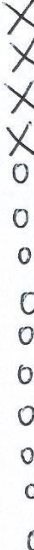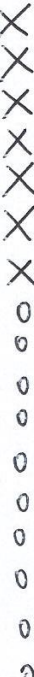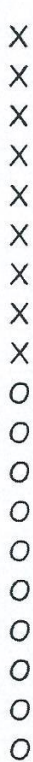
Objective: Show, count, and write numbers 11 to 20 in tower configurations increasing by 1-a pattern of *1 larger*.

Homework Key

11 written
10 o's and 2 x's drawn to make 12
13 written
10 o's and 4 x's drawn to make 14
15 written
10 o's and 6 x's drawn to make 16
10 o's and 7 x's drawn to make 17
10 o's and 8 x's drawn to make 18
19 written
10 o's and 10 x's drawn to make 20

Homework Samples

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

10	11	12	13	14	15	16	17	18	19	20

Lesson 12

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

Homework Key

19 written
10 o's and 8 x's drawn to make 18
17 written
10 o's and 6 x's drawn to make 16
15 written
10 o's and 4 x's drawn to make 14
10 o's and 3 x's drawn to make 13
10 o's and 2 x's drawn to make 12
11 written
10 o's drawn to make 10

Homework Samples

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

	19	18	17	16	15	14	13	12	11	10
20	19	18	17	16	15	14	13	12	11	10

Lesson 13

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

Homework Key

Dots drawn to show 10 and 5
Dots drawn to show 10 and 7
Dots drawn to show 10 and 2
Dots drawn to show 10 and 9

Homework Samples

Count the objects. Draw dots to show the same number on the double 10-frames.

Lesson 14

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

Homework Key
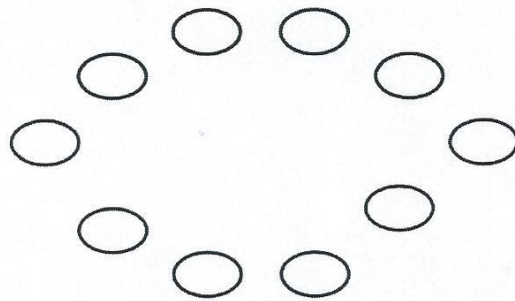
12
10
9 more dots drawn
10 dots and 8 dots drawn; 18
Answers will vary.

Homework Samples

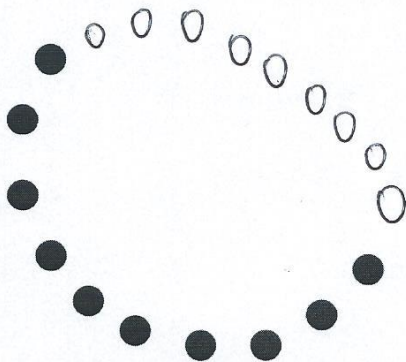Count the objects in each group. Write the number in the boxes below the pictures.
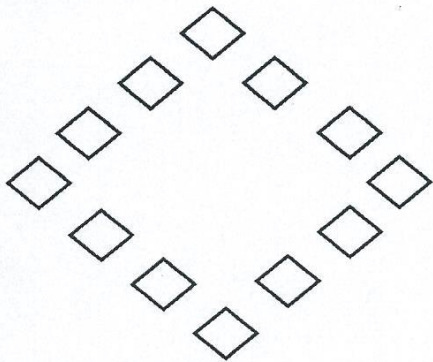
Count and draw in more shapes to match the number.

Grade K Module 5 Topic D

Extend the Say Ten and Regular Count Sequence to 100

Focus Standards:

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).

Instructional Days Recommended: 5

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 some of the numbers ranging from 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 is not assessed. The final lesson of this topic is an optional exploration of decomposing numbers to 100 on the Rekenrek.

Lesson 15

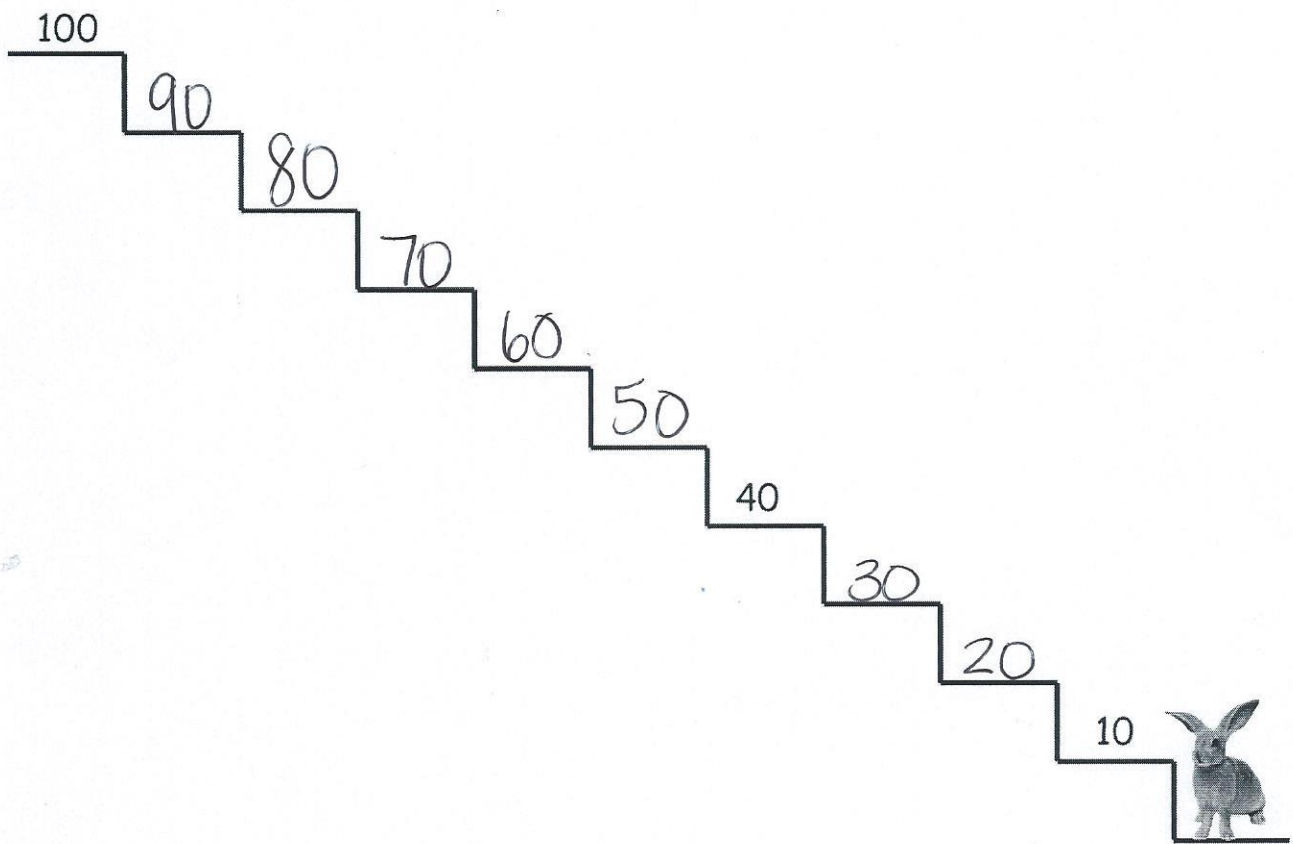Objective: Count up and down by tens to 100 with Say Ten and regular counting.

Homework Key

90, 80, 70, 60, 50, 30, 20

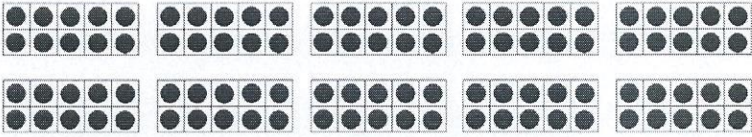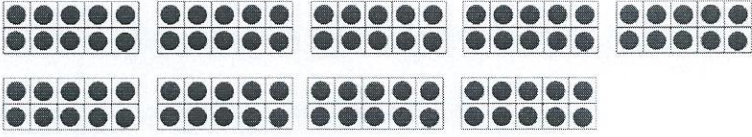10 tens, 90, 8, 7, 60, 50, 5, 30, 3, 20, 2, 10, 1
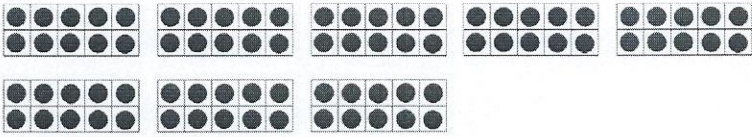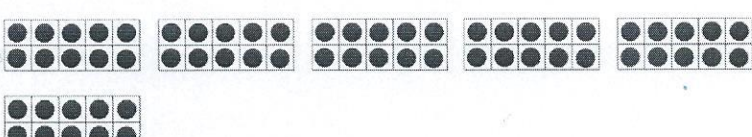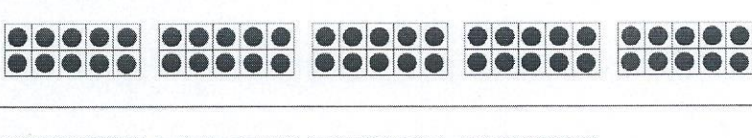
Homework Samples

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

Lesson 15 (continued)

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

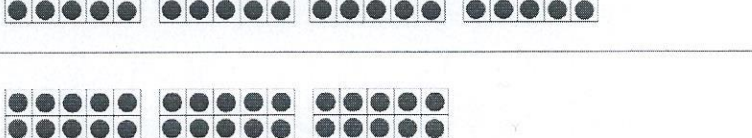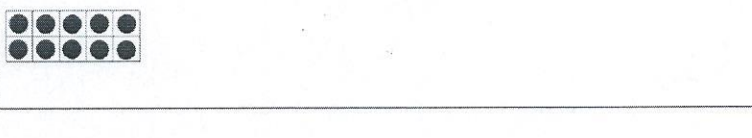|		
	100	10 tens
	90	9 tens
	80	8 tens
	70	7 tens
	60	6 tens
	50	5 tens
	40	4 tens
	30	3 tens
	20	2 tens
	10	1 ten

Lesson 16

Objective: Count within tens by ones.

Homework Key

72, 73, 74, 76, 77, 78
10, 11, 13, 15, 17, 18, and 19
85, 86, 87, 88, 89; 88, 87, 86, 85, 84
31, 32, 33, 34, 35; 34, 33, 32, 31, 30
97, 98, 99, 98, 96

Homework Samples

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

71 72 73 74 75 76 77 78
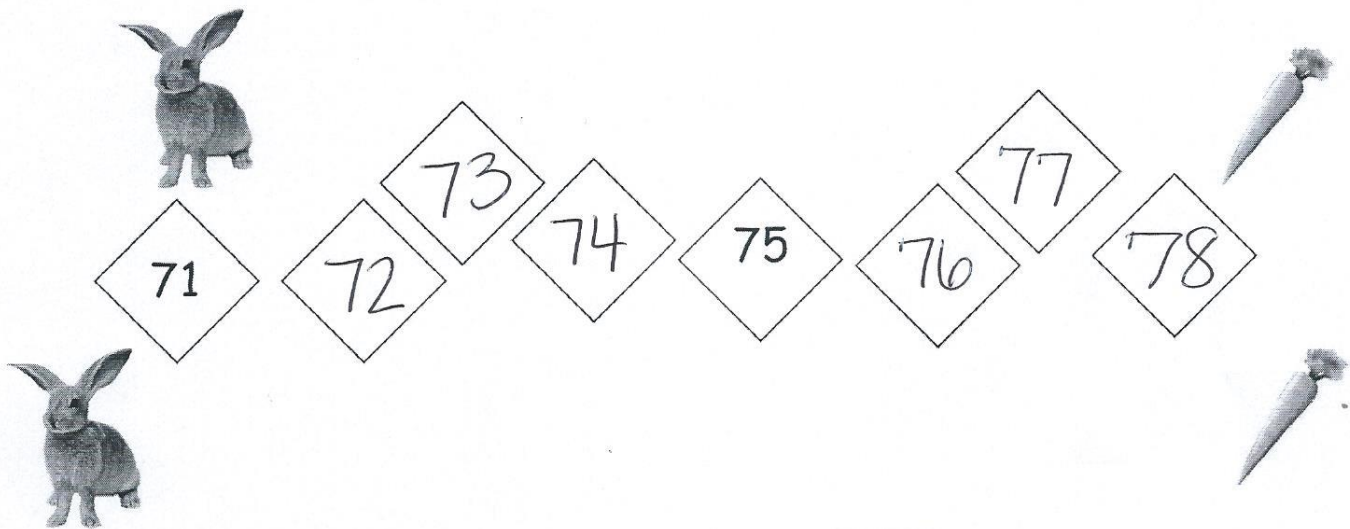
10 11 12 13 14 15 16 17 18 19

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

89	89	↓
88	88	
87	87	
86	86	
85	85	
↑ 84	84	

35	35	↓
34	34	
33	33	
32	32	
31	31	
↑ 30	30	

Lesson 16 (continued)

down by 1s.
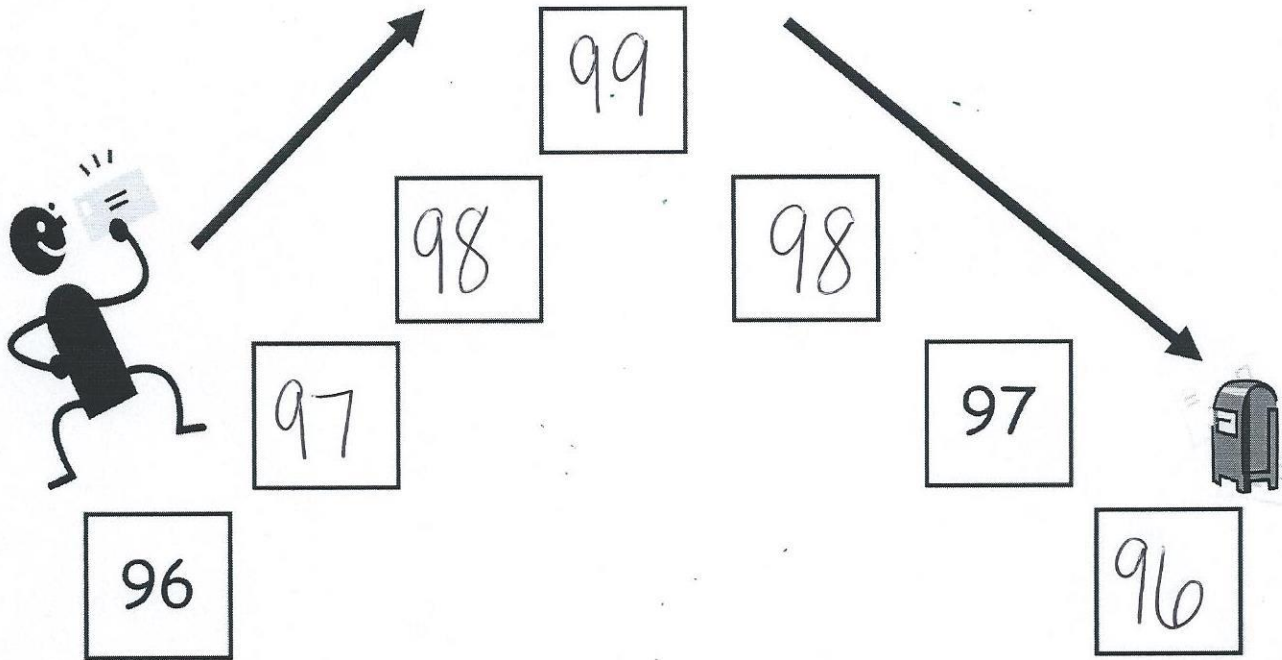
Lesson 17
Objective: Count across tens when counting by ones through 40.

Homework Key
3 more dots drawn to make 23
20 more dots drawn to make 27
10 more dots drawn to make 34
8 more stars drawn to make 38
10 more raindrops drawn to make 40

Homework Samples

Draw more to show the number.

Example:
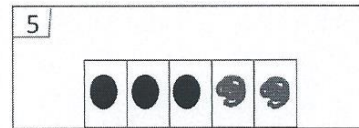
23

27

34

Lesson 18

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

Homework Key

Circle 28 colored green; circle 34 colored red
Circle 45 colored yellow; circle 52 colored blue
Circle 83 colored purple; circle 77 colored red
Last number in each row colored black

Homework Samples

Rekenrek

Lesson 19 (Optional Lesson)

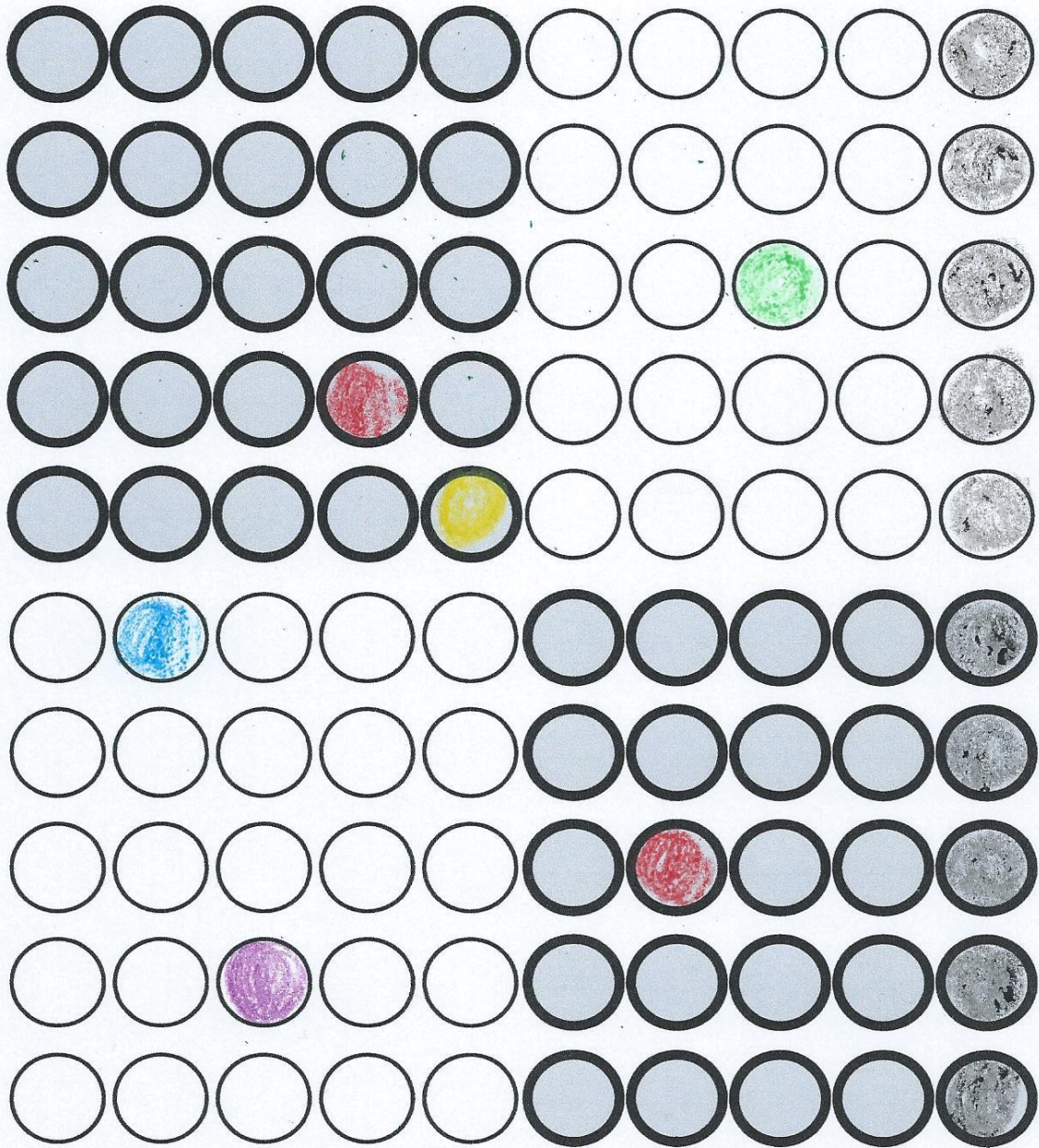Objective: Explore numbers on the Rekenrek.

Homework Key

37, 1 more drawn, 38
11, 1 more drawn, 12
43, 1 more drawn, 44
25, 1 more drawn, 26
40, 1 more drawn, 41
36, 1 more drawn, 37

Homework Samples

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.

Represent and Apply Compositions and Decompositions of Teen Numbers

Focus Standards:

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.

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.

Instructional Days Recommended: 5

Topic E's Lesson 20 begins as students represent teen number decompositions and compositions by writing addition sentences. In Lesson 21, students make bonds with materials and hide one of the parts for their partners, 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 22, 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.

The sample homework responses contained in this manual are intended to provide insight into the skills expected of students and instructional strategies used in Eureka Math.

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Lesson 20

Objective: Represent teen number compositions and decompositions as addition sentences.

Homework Key

5 stars drawn; 15 = 10 + 5; 10 + 5 = 15
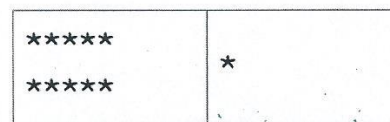10 stars drawn; 17 = 10 + 7; 10 + 7 = 17
9 stars drawn; 19 = 10 + 9; 10 + 9 = 19
10 stars and 4 stars drawn; 14 = 10 + 4; 10 + 4 = 14
10 stars drawn; 20 = 10 + 10; 10 + 10 = 20

Homework Samples

Draw stars to show the number as a number bond of 10 ones and some ones. Show each example as two addition sentences of 10 ones and some ones.
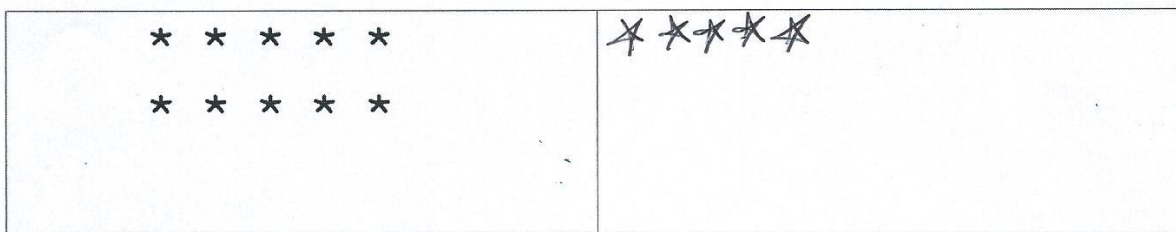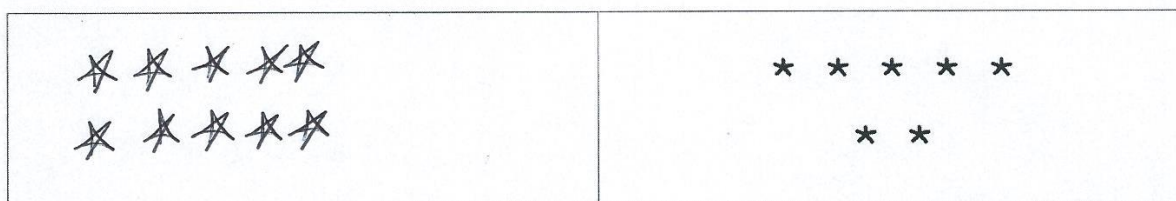
| ***** | |
| ***** | * |

11

10 + 1 = 11
11 = 10 + 1

| * * * * * * * * * * | ✸ ✸✸✸✸ |

15

15 = 10 + 5
10 + 5 = 15

| ✸✸ ✸ ✸✸ ✸ ✸✸✸✸ | * * * * *   * * |

17

17 = 10 + 7
10 + 7 = 17

Lesson 21

Objective: Represent teen number decompositions as 10 ones and some ones, and find a hidden part.
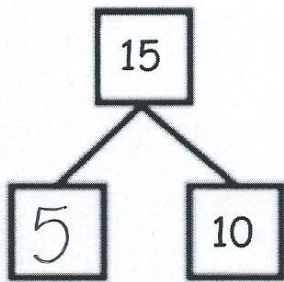
Homework Key

5; 5; 5 cubes drawn
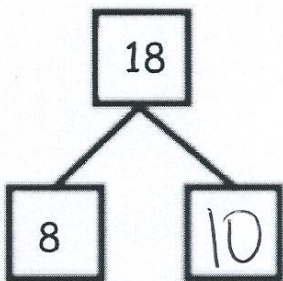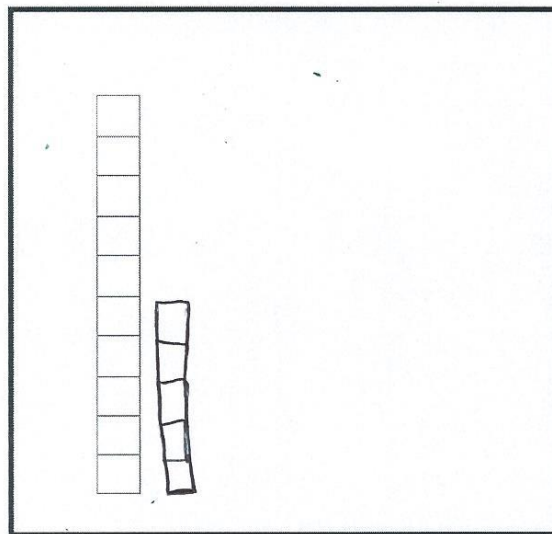10; 10; 10 cubes drawn
16; 10; 10 cubes drawn
10; 10; 10 cubes drawn

Homework Samples

Complete the number bonds and number sentences. Draw the cubes of the missing part.

15

5   10

15 = ___5___ + 10
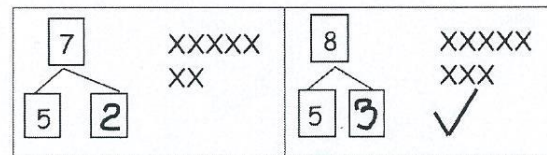
18

8   10

___10___ + 8 = 18
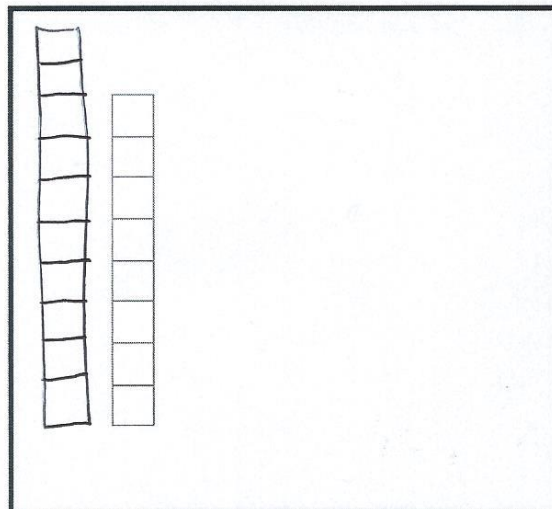
Lesson 22

Objective: Decompose teen numbers as 10 ones and some ones; compare *some ones* to compare the teen numbers.

Homework Key

6; 7; second group checked
10; 1; first group checked
12; 20; second group checked

Homework Samples

Fill in the number bond.
Check the group with *more*.

```
  7        XXXXX      8        XXXXX
           XX                  XXX
 5   2              5   3        ✓
```

```
    16       XXXXX
             XXXXX
             OOOOO
 10    6     O
```

```
    17       XXXXX
             XXXXX
             OOOOO
 10    7     OO
              ✓
```

```
    13       XXXXX
             XXXXX
             OOO
 10    3
         ✓
```

```
    11       XXXXX
             XXXXX
             O
 10    1
```

```
    12       XXXXX
             XXXXX
             OO
 10    2
```

```
    20       XXXXX
             XXXXX
             OOOOO
 10    10     OOOOO
          ✓
```

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.
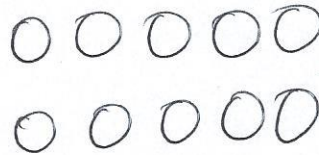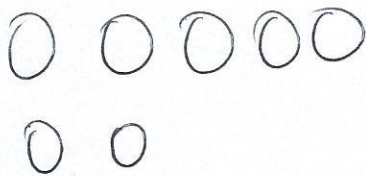
Homework Key

17 donuts drawn; 17 = 10 + 7; 17, 10, 7

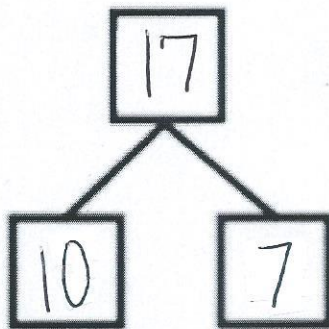17 baseball cards drawn; 10 + 7 = 17; 17, 10, 7

Homework Samples

Bob bought 7 sprinkle donuts and 10 chocolate donuts. Draw and show all of Bob's donuts.

O O O O O
O O

O O O O O
O O O O O

Write an addition sentence to match your drawing.

$$17 = 7 + 10$$

Fill in the number bond to match your sentence.

17
10   7

Lesson 24

Objective: Culminating Task-Represent teen number decompositions in various ways.

Culminating Activities

Answers will vary.