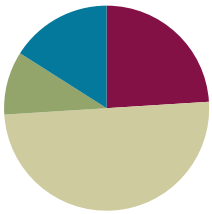
Lesson 35

Objective: Decompose the number 9 using 5-group drawings, and record each decomposition with a subtraction equation.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(5 minutes)
Concept Development	(25 minutes)
Student Debrief	(8 minutes)
Total Time	**(50 minutes)**



Fluency Practice (12 minutes)

- Core Fluency Differentiated Practice Sets **K.OA.5** (5 minutes)
- Spill the Beans **K.OA.5** (4 minutes)
- Happy Counting **K.CC.2** (3 minutes)

Core Fluency Differentiated Practice Sets (5 minutes)

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

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

Distribute Practice Sets A, B, C, or D based on student performance in Lesson 33. Students who correctly answered all questions on a Practice Set in the previous attempt should move to the next Practice Set. All other students should try to improve their scores on Practice Set A.

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

Spill the Beans (4 minutes)

Materials: (S) 5 beans painted red on one side or 5 two-sided counters, cup, personal white board

Note: This activity leads students to mastery of the fluency goal for the grade: Add and subtract within 5.

Have students complete the following steps:

1. Take 3 beans out of the bag, and place them in the cup.

2. Shake the cup gently, and then spill the beans onto the personal white board.
3. Take away the red beans, and record as a subtraction sentence (e.g., 3 – 2 = 1).
4. Erase, and repeat a few more times.

If students demonstrate mastery with subtraction to 3, repeat the process for 4 and 5.

Happy Counting (3 minutes)

Note: Fluidity with counting forward and backward builds students' number sense and sets the stage for counting on strategies used in Grade 1.

Conduct the activity as described in Lesson 19, but continue to 15 or 20.

Application Problem (5 minutes)

Materials: 9 pennies, personal white board

Steve had 9 pennies. He wanted to put some pennies into each of his two pockets. Use your pennies to show one way he could have separated them. Make a number bond about your idea. Show your number bond to your partner. Did she do it the same way? How many different ways can you separate the pennies?

Note: A concrete review of the decomposition of 9 prepares students to work with equations in today's lesson.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Challenge students working above grade level by extending the Application Problem to show all the ways Steve could separate his 9 pennies. Students can then share with the class how they went about finding the different ways to make 9.

Concept Development (25 minutes)

Materials: (S) Subtraction equation (Lesson 33 Template), personal white board

T: Connie had 9 bouncy balls. Let me draw the balls in the 5-group way on the board. (Demonstrate drawing the 5-group way.) 3 of the balls were green. I will draw a circle around a group of 3 to show the balls that were green. (Draw the circle.) How many of the balls were not green?

MP.7

S: 6.

T: How did you know?

S: I counted the ones that were not in the circle. → I took away the 3 to get 6. → I saw 5 and 1 more weren't green.

T: You are right! How do I make a number bond about this?

S: Our whole is 9. → We have parts of 3 and 6.

T: (Write the number bond on the board.) We could also write this as a subtraction sentence, couldn't we? Let's find out how many balls are not green! Cross out the part of 3. 9 balls take away 3 green balls leaves …?

S: 6 balls!

T: Please help me write the subtraction sentence. (Allow students to offer guidance in creating the sentence.) Let's read it together.

S: 9 – 3 = 6.

T: Let's try another. Doug had 9 special rocks. Draw the rocks.

T: He had 4 white rocks. This time, let's circle the 4 rocks to show the ones that were white. Let's cross off that part to see how many were left. How many rocks were another color?

S: 5. → I counted the 5 that were not crossed off.
→ I counted on from 4 to 9.

T: Who can give me a number sentence to tell me about the picture?

S: 9 rocks take away 4 white rocks leaves 5 rocks.

T: Let's write and read that together: 9 – 4 = 5.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

When it is time to share, allow English language learners to use their boards to point and show what they did in response to the story. Help them to produce language by providing them with sentence starters, such as "___ apples are green" and "I got my answer by …"

T: Now it is time for partner work. Listen to my story, and make the picture on your personal white board. Then, you may work with your partner to make a number sentence about your story.

T: Calla had 9 apples. Draw her apples. (Allow students time to draw.) 7 of her apples were green. Circle and cross off the 7 green apples. Now, write a number sentence to tell me how many apples were not green. (Circulate to ensure accuracy and comprehension. If appropriate, choose pairs of students to model their work on the board or on chart paper and explain their thinking to the class.)

T: Great! Let's do this another way! What if Calla had only 1 green apple? How would your picture and your number sentence change? Talk to your partner about the new story. (Allow time for sharing and discussion.)

T: Now you and your partner can take turns deciding how many green apples Calla had. Each time, make a new picture, and write the number sentence. Raise your hand when you and your partner have a new number sentence for me to look at, and I will collect them for the board! (Allow time for students to create several iterations of the story. Then, allow students to share their equations to be reviewed at the end of the lesson or during the Student Debrief.)

Problem Set (10 minutes)

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

Student Debrief (8 minutes)

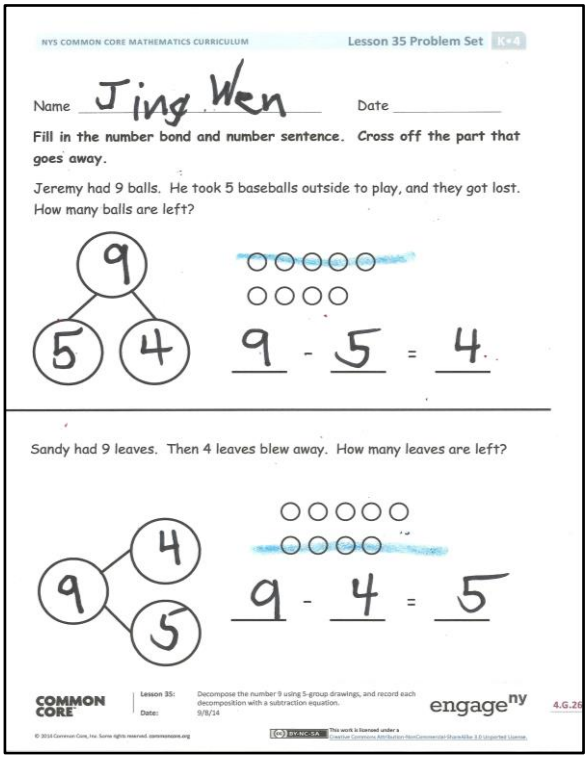
Lesson Objective: Decompose the number 9 using 5-group drawings, and record each decomposition with a subtraction equation.

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

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

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

- Look at the first problem. Tell your neighbor what each dot represents. (Look for a response that each dot represents one of the balls.)
- How did you decide where to place each number in your number sentences?
- Do you always have to take time drawing a picture, or can we represent pictures with something easier and faster to draw? Did we do this in the Problem Set?
- What strategy did you use to solve the subtraction sentences at the end of the Problem Set? (Answers will vary. Many students know these facts after repeated experiences. Others may still be using fingers or drawings to solve.)
- What is similar about the number sentences we listed on the board? What is different?
- How does crossing out in a picture help you to find the numbers for a number sentence?



NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 35 Problem Set K•4

Name Jing Wen Date

Fill in the number bond and number sentence. Cross off the part that goes away.

Jeremy had 9 balls. He took 5 baseballs outside to play, and they got lost. How many balls are left?

9 = 5 + 4

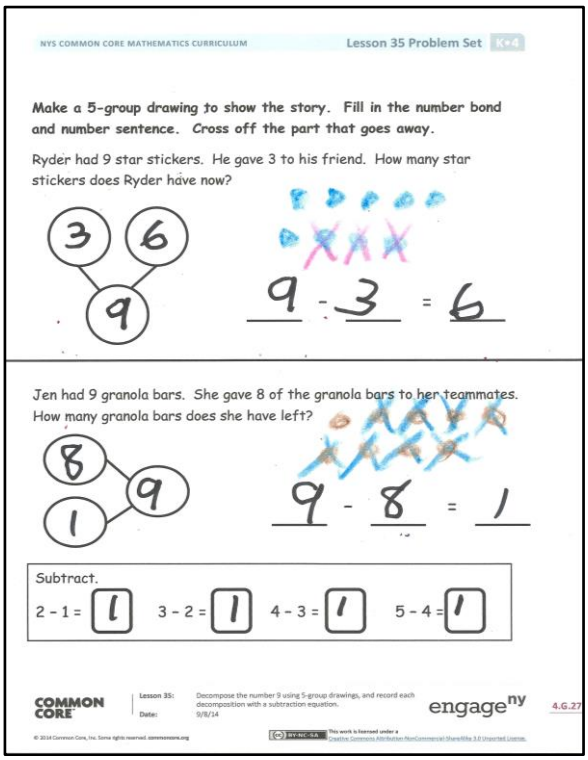
9 - 5 = 4

Sandy had 9 leaves. Then 4 leaves blew away. How many leaves are left?

9 = 4 + 5

9 - 4 = 5

COMMON CORE Lesson 35: Decompose the number 9 using 5-group drawings, and record each decomposition with a subtraction equation. Date: 9/8/14 engage^ny 4.G.26



NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 35 Problem Set K•4

Make a 5-group drawing to show the story. Fill in the number bond and number sentence. Cross off the part that goes away.

Ryder had 9 star stickers. He gave 3 to his friend. How many star stickers does Ryder have now?

9 = 3 + 6

9 - 3 = 6

Jen had 9 granola bars. She gave 8 of the granola bars to her teammates. How many granola bars does she have left?

9 = 8 + 1

9 - 8 = 1

Subtract.

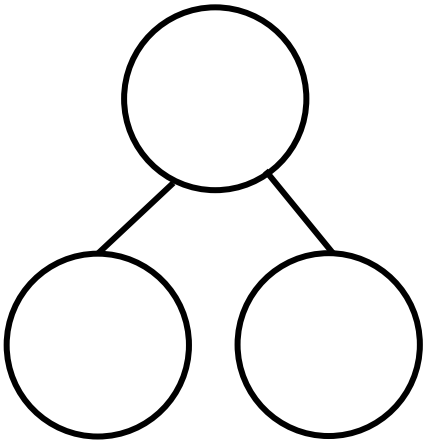
2 - 1 = 1 3 - 2 = 1 4 - 3 = 1 5 - 4 = 1

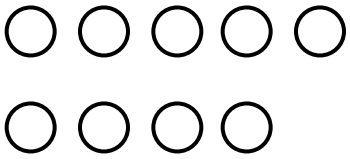
COMMON CORE Lesson 35: Decompose the number 9 using 5-group drawings, and record each decomposition with a subtraction equation. Date: 9/8/14 engage^ny 4.G.27

Name _____ Date _____

Cross off the part that goes away. Fill in the number bond and number sentence.

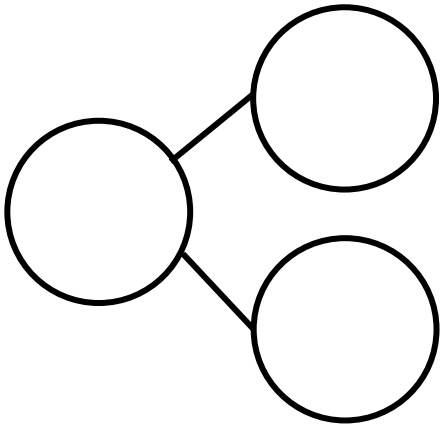
Jeremy had 9 baseballs. He took 5 baseballs outside to play, and they got lost. How many balls are left?

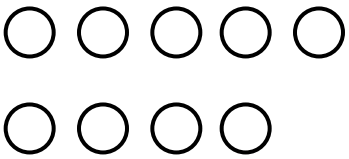




___ - ___ = ___

Sandy had 9 leaves. Then, 4 leaves blew away. How many leaves are left?

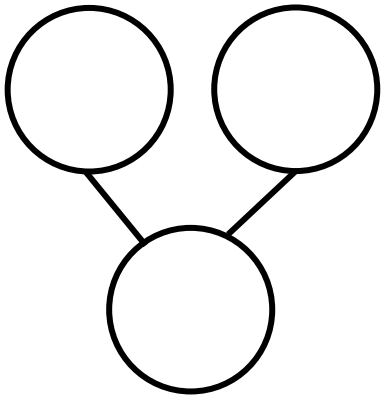




___ - ___ = ___

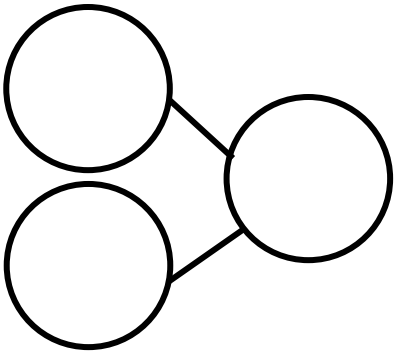
Make a 5-group drawing to show the story. Cross off the part that goes away. Fill in the number bond and number sentence.

Ryder had 9 star stickers. He gave 3 to his friend. How many star stickers does Ryder have now?



____ - ____ = ____

Jen had 9 granola bars. She gave 8 of the granola bars to her teammates. How many granola bars does she have left?



____ - ____ = ____

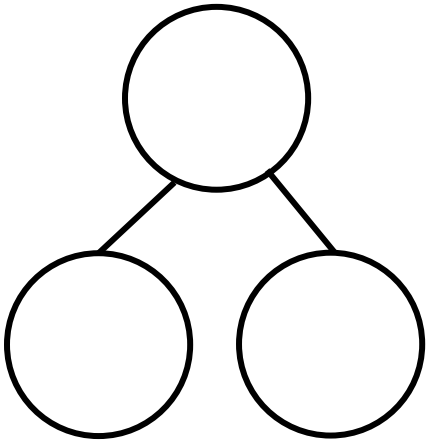
Subtract.

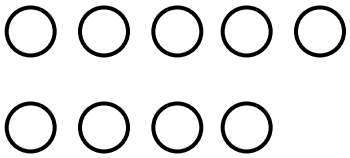
2 – 1 = ☐ 3 – 2 = ☐ 4 – 3 = ☐ 5 – 4 = ☐

Name _____ Date _____

Cross off the part that goes away. Fill in the number bond and number sentence.

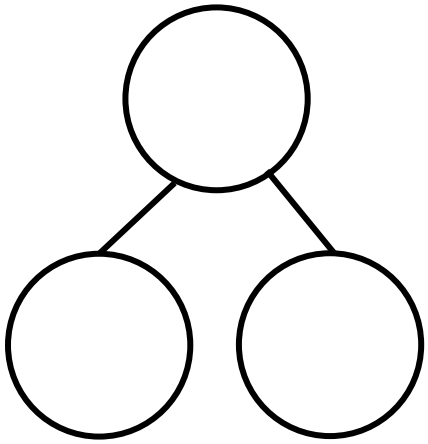
Mary had 9 library books. She returned 1 book to the library. How many books are left?

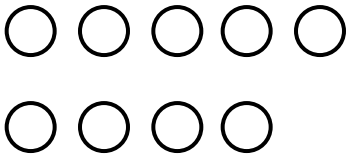




___ - ___ = ___

There were 9 lunch bags. 3 bags were thrown away. How many bags are there now?

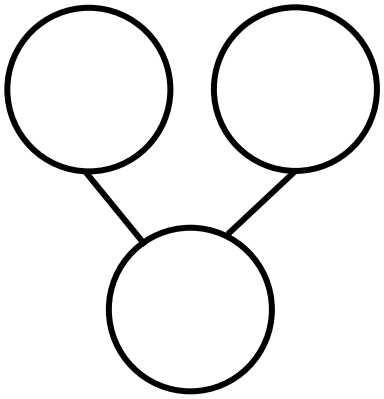




___ - ___ = ___

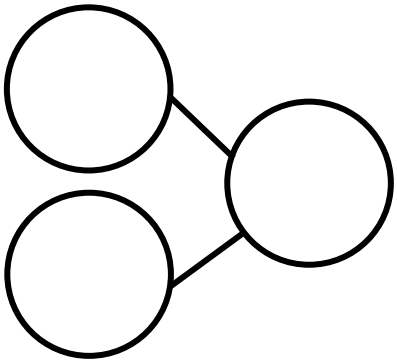
Make a 5-group drawing to show the story. Cross off the part that goes away. Fill in the number bond and number sentence.

Ms. Lopez has 9 pencils. 7 of them broke. How many pencils are left?



____ – ____ = ____

There are 9 soccer balls. The team kicked 5 of the balls at the goal. How many soccer balls are left?



____ – ____ = ____

Subtract.

5 – 2 = ☐ 4 – 2 = ☐ 3 – 2 = ☐ 2 – 1 = ☐