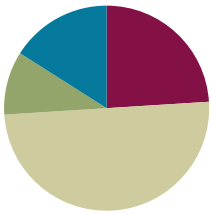
Lesson 3

Objective: Represent composition story situations with drawings using numeric number bonds.

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)

- Sprint: Number Order to 5 **K.CC.2** (12 minutes)

Sprint: Number Order to 5 (12 minutes)

Materials: (S) Number Order to 5 Sprint (2 copies)

Note: Students grow more comfortable with the Sprint routine while completing a task that involves relatively simple concepts. This activity continues to build confidence and enthusiasm for Sprints.

T: It's time for a Sprint! (Briefly recall previous Sprint preparation activities, and distribute Sprints facedown.) Take out your pencil and one crayon, any color.

T: For this Sprint, using your pencil, you are going to fill in the missing number. On your mark, get set, go!

T: (Ring the bell or give another signal for students to stop.) Pencils up!

T: Pencils down, crayons up!

T: It's time to check answers. What do you do if the answer is right?

S: Circle it. (Circling correct answers instead of crossing out wrong ones avoids stigmatization.)

T: What do you say?

S: Yes.

T: We'll begin at the top. Ready? 5.

S: Yes!

Continue checking the remaining answers, and then have students count how many correct, and write the number at the top. Keep the mood celebratory.

T: Before we try again, let's get our minds and bodies ready to work hard with an exercise. Stand up, and push in your chairs. Let's touch our toes while counting to 10. Ready?

S: 1, 2, 3, …, 10 (touch toes at every count).

T: Hands on your hips, twist slowly, counting down from 10. Ready? (While students exercise, distribute the second set of Sprints, which is the same as the first.)

S: 10, 9, 8, …, 1 (while twisting).

T: Have a seat. Pencils up. Do you remember the number you got the first time?

S: Yes.

T: See if you can beat your score! Race against yourself! On your mark, get set, go!

Students work on the Sprint for a second time. Give the signal to stop, reiterating that it is okay not to finish. Continue to emphasize that the goal is simply to do better than the first time. Proceed through the checking answers procedure with more enthusiasm than ever. Then, facilitate a comparison of Sprint A to Sprint B. Because students are still developing understanding of the concept of more, it may be necessary to circulate and facilitate the comparison, either visually or numerically.

T: Stand up if you beat your score.

T: Let's celebrate (congratulate each other, give three pats on the back, shake hands, have a parade, etc.).

Variation: Allow students to finish, but provide an early finisher activity to do on the back.

Application Problem (5 minutes)

Materials: (S) Set of 5 linking cubes, number bond (Lesson 1 Template 2) inserted into personal white board

Chris has 3 baseball cards. Use your cubes to show his cards. Katharine has 2 baseball cards. Show her cards with your cubes. Now, with your cubes, show how many cards they have together.

Make a picture on your personal white board to show the story. Can you make a number bond picture about your story? Talk about your work with your partner.

Note: This problem sets the stage for compositions of numbers to 5 in today's lesson and is the first time students are making a number bond drawing without a template.

A NOTE ON MULTIPLE MEANS OF REPRESENTATION:

Scaffold the Application Problem for students working below grade level by modeling directions step by step, "Let's show 3 baseball cards. Count with me, 1, 2, 3. Now let's show Katharine's 2 baseball cards. 1, 2," until students are able to work on their own.

Concept Development (25 minutes)

Materials: (S) Number bond (Lesson 1 Template 2) inserted into personal white board

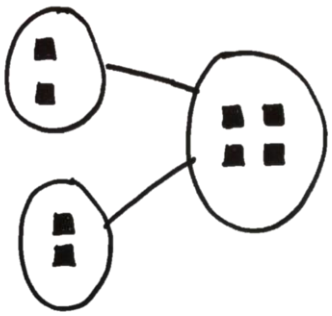
NOTES ON MULTIPLE MEANS OF REPRESENTATION:

When introducing the terms *part* and *whole,* ensure English language learners clearly understand that the word is *whole* and not *hole.* Teach them the difference between the two words by showing them a picture of a hole and a picture of a whole apple cut into parts. Post the pictures and the written words on the word wall.

T: Close your eyes, and imagine this story. Two squirrels were playing in the park. Two more squirrels came to join them. Now, open your eyes. In one of your hoops, one of the **parts**, draw squares to show the squirrels that were first playing in the park. (Demonstrate.) In another hoop, the other **part**, draw squares to show the squirrels that joined them. (Demonstrate.) Where would we draw the squares to show all of the squirrels together? (Allow time for discussion.)

S: In the hoop with two paths! → We would draw 4 squares there.

T: Yes, we would draw squares for all of the squirrels together in the **whole**. (Demonstrate.) Finish your number bond on your personal white board, and hold it up.



T: What would happen if we turned our number bond around so the whole is on the left? Try it. Does it change our story?

S: No. → It just looks different. → The squirrels are the same. → To me, it makes the story start with the 4 squirrels. I saw 4 squirrels. 2 were in the park, and 2 more came to play.

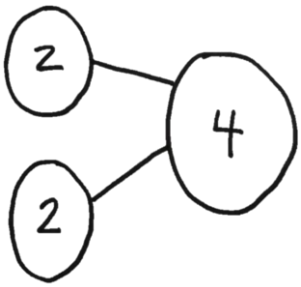
T: Sometimes I get so tired of drawing squares! Would it be fair to use a secret shortcut? How many squares are in this part?

S: 2.

T: Can we erase the squares in that part and write a 2 instead? Would that be fair?

S: Yes! You could put a number for the squares! → You could use numbers instead of the pictures.

MP.4



T: Let me replace my squares with numbers. (Demonstrate.) Have I changed anything about the story?

S: No. It just looks different. → You just used numbers instead.

T: Count the squares in each of your hoops, erase them, and write the numbers instead. Turn and talk to your partner about the secret shortcut. (Allow time for discussion.)

T: Erase your boards. Listen to my next story, and draw a picture on your personal white boards to show what happens.

T: John read 3 picture books one night. Draw his books. (Pause to allow time for drawing.) The next night, he read 2 more picture books. Draw his new books. (Pause to allow time for drawing.) How many books did John read?

T: Hold up your board to show me John's books. (Circulate to ensure accuracy.)
T: Great! Let's use our secret shortcut to make a number bond for this story. How many books did John read the first night?
S: 3.
T: Write the number 3 in this part of the number bond. (Demonstrate.) How many books did he read the second night?
S: 2.
T: Write the number 2 in this part of the number bond. Now, turn and talk to your partner to find out how many books John read in all. (Allow time for discussion.) How many?
S: 5.
T: Write the number 5 in the whole part of the number bond. We did it! Hold up your board! (Circulate to ensure accuracy.)

Use other combinations to create additional number bonds. For example, "What if John had read only 1 book the first night and 4 the second? How would that change our number bond? Could you write the number bonds using only numbers?" Let students practice writing the bonds without demonstrating on the board.

Problem Set (10 minutes)

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

Student Debrief (8 minutes)

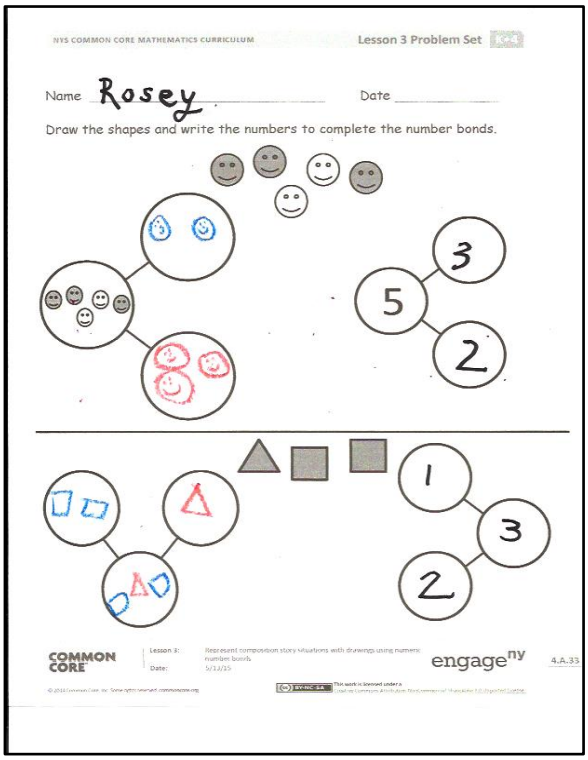
Lesson Objective: Represent composition story situations with drawings using numeric number bonds.

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.

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

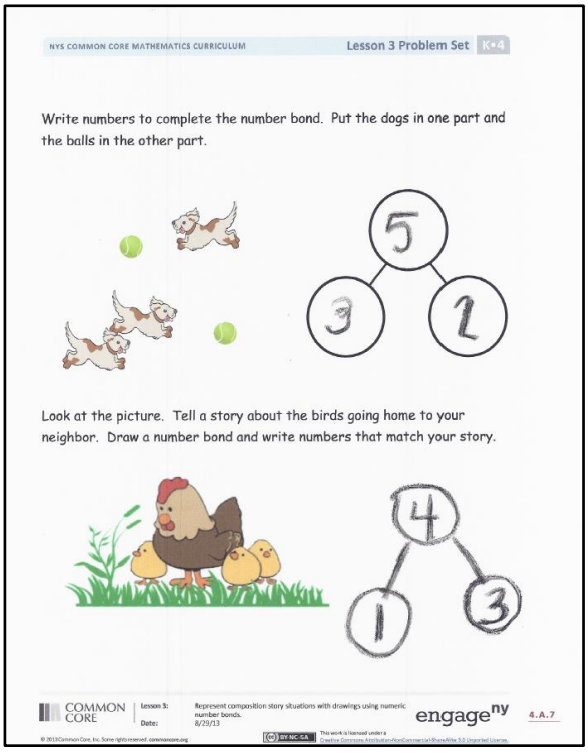
- What is a **part**? What is the **whole**? How do they work together?
- Does it matter if we use pictures or numbers to show a story? Does it matter if we use pictures or numbers in our number bond? Why or why not?


NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 3 Problem Set

Name Rosey Date

Draw the shapes and write the numbers to complete the number bonds.

- Look at the smiley faces on your Problem Set. Did your neighbor put the red (gray) faces and the white faces in the same parts as you did? Does it matter where we draw the smiley faces that are in the parts?
- What is the fastest way to tell about the triangles and squares in a number bond? Drawing the shapes or writing the numbers?
- Does it make a difference where I write the numbers in the number bond?



NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 3 Problem Set K•4

Write numbers to complete the number bond. Put the dogs in one part and the balls in the other part.

5
3 2

Look at the picture. Tell a story about the birds going home to your neighbor. Draw a number bond and write numbers that match your story.

4
1 3

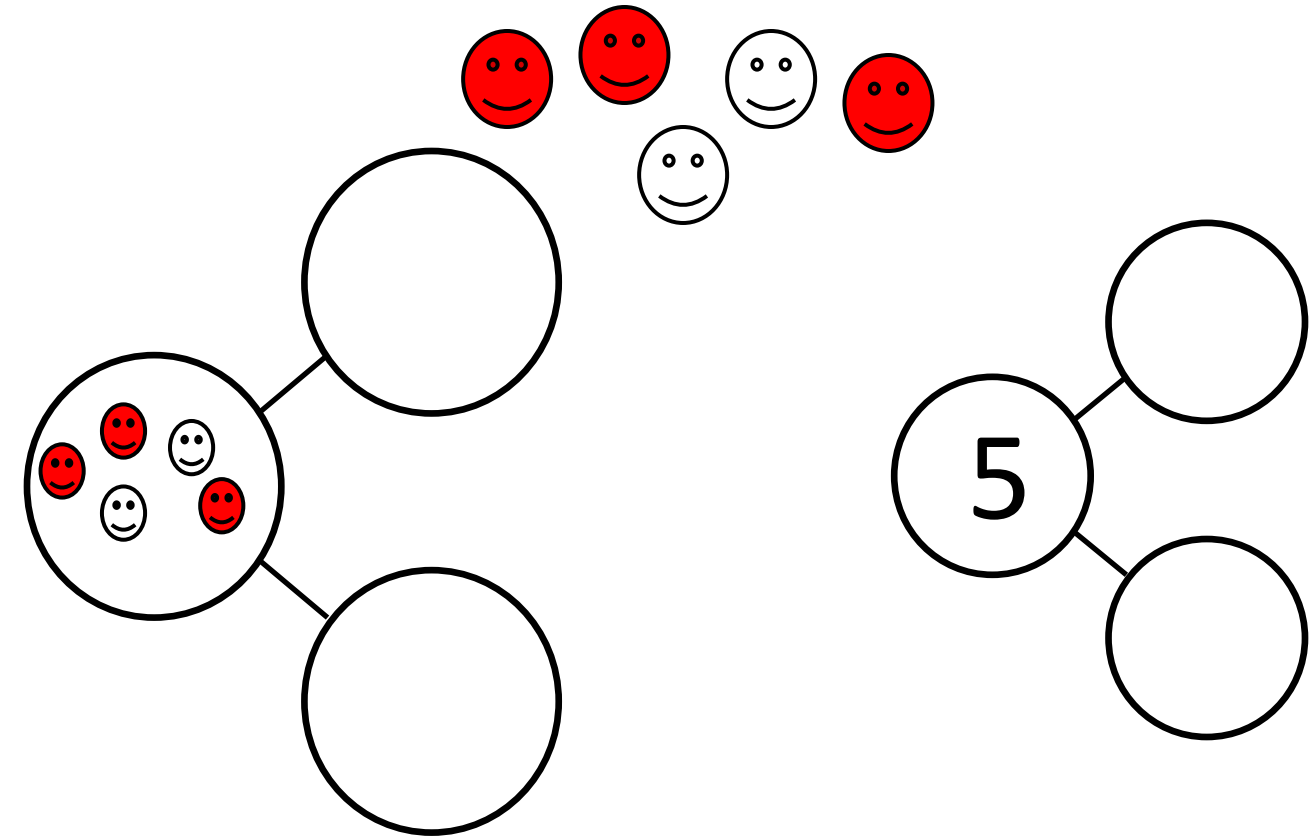
COMMON CORE | Lesson 3: Represent composition story situations with drawings using numeric number bonds. Date: 8/29/13 engage^ny 4.A.7

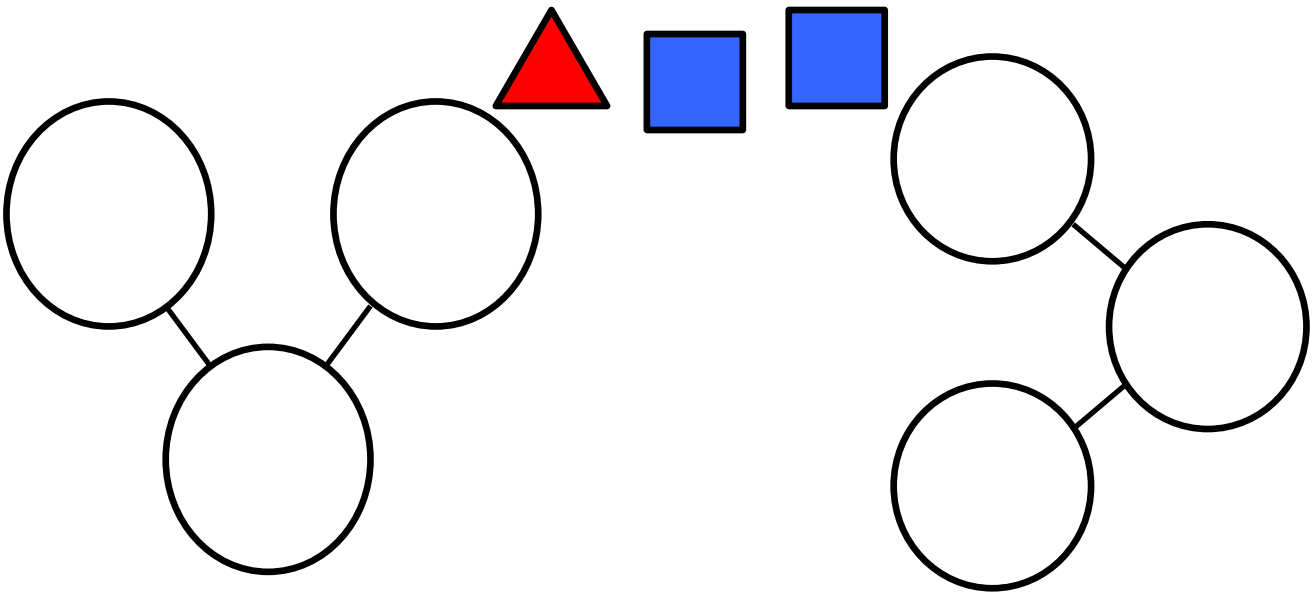
Fill in the missing number.

0, 1, 2, 3, 4, _____	_____, 4, 3, 2, 1, 0
0, 1, 2, 3, _____, 5	5, _____, 3, 2, 1, 0
0, 1, 2, _____, 4, 5	5, 4, _____, 2, 1, 0
0, 1, _____, 3, 4, 5	5, 4, 3, _____, 1, 0
0, _____, 2, 3, 4, 5	5, 4, 3, 2, _____, 0
_____, 1, 2, 3, 4, 5	5, 4, 3, 2, 1, _____
0, _____, 2, 3, 4, 5	0, 1, 2, 3, _____, 5
0, 1, _____, 3, 4, 5	5, 4, _____, 2, 1, 0
0, 1, 2, _____, 4, 5	0, 1, _____, 3, 4, 5
0, 1, 2, 3, _____, 5	_____, 1, 2, 3, 4, 5

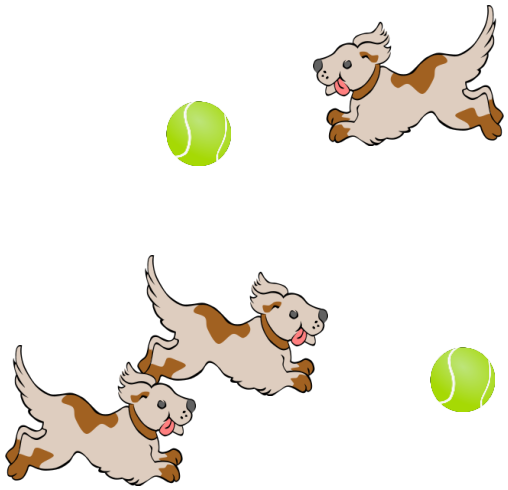
Name _____ Date _____

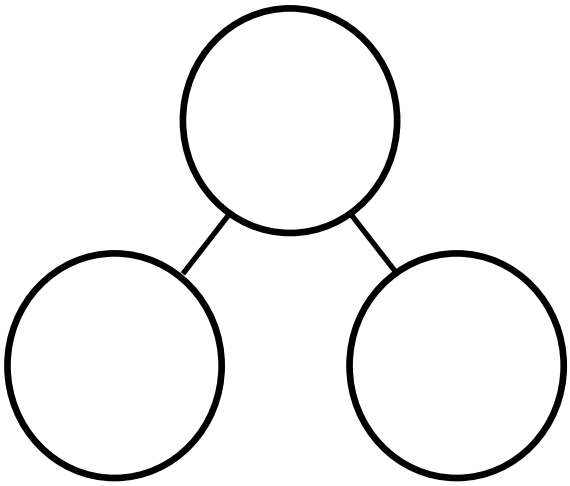
Draw the shapes and write the numbers to complete the number bonds.



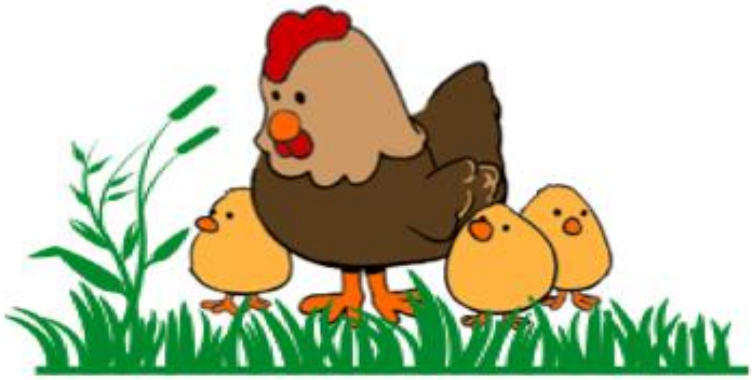


Write numbers to complete the number bond. Put the dogs in one part and the balls in the other part.



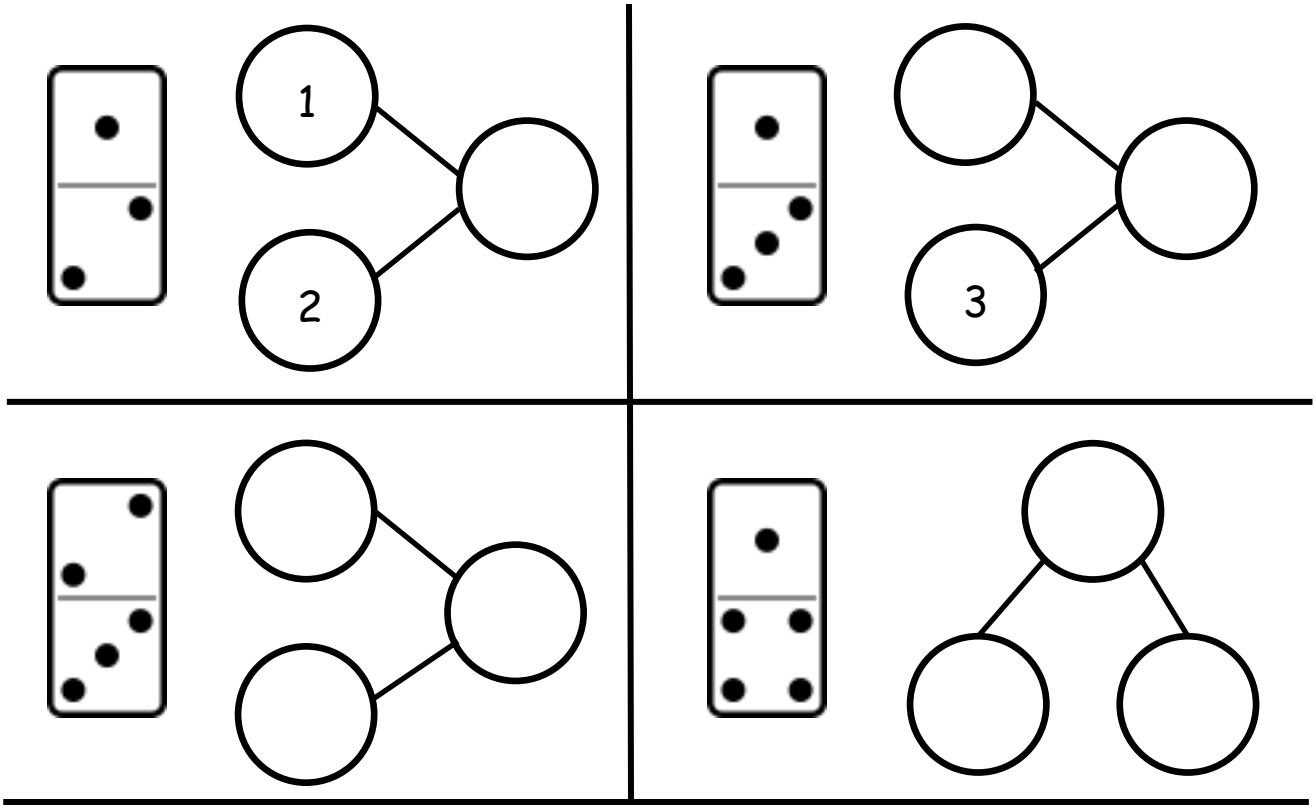


Look at the picture. Tell a story about the birds going home to your neighbor. Draw a number bond, and write numbers that match your story.



Name _____ Date _____

Fill in the number bond to match the domino.



Fill in the domino with dots, and fill in the number bond to match.