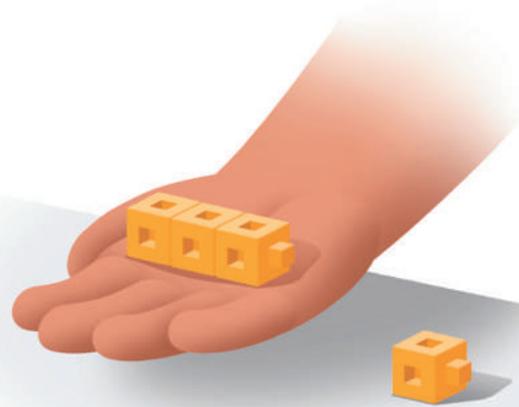




Core Knowledge[®] MATHEMATICS

Composing and Decomposing Numbers to 10



Teacher Guide



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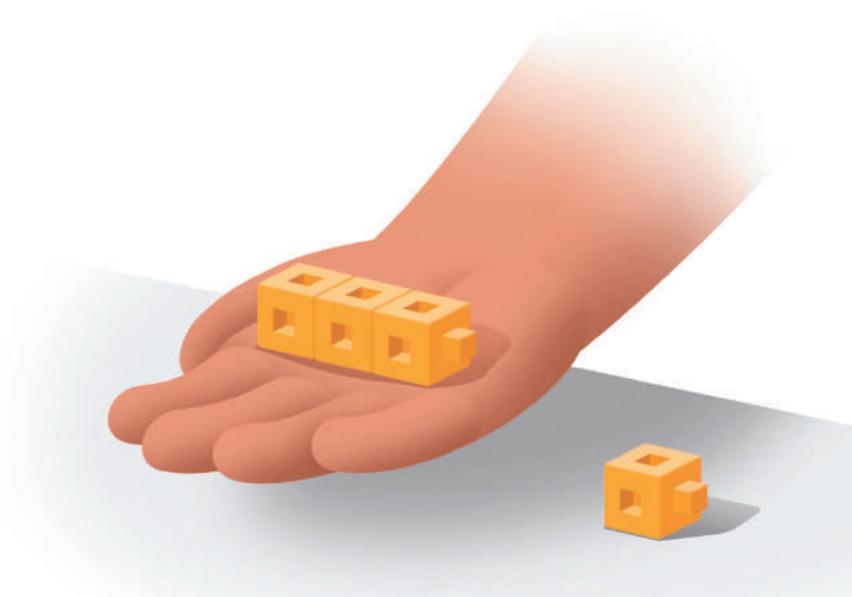
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Composing and Decomposing Numbers to 10

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Composing and Decomposing Numbers to 10

Teacher Guide

Core Knowledge Mathematics™

Unit 5: Composing and Decomposing Numbers to 10

At a Glance

Unit 5 is estimated to be completed in 15-17 days including 2 days for assessment.

This unit is divided into three sections including 13 lessons and 2 optional lessons.

- Section A—Make and Break Apart Numbers to 9 (Lessons 1-4)
- Section B—More Types of Story Problems (Lessons 5-9)
- Section C—Make and Break Apart 10 (Lessons 10-15)

On pages 6-8 of this Teacher Guide is a chart that identifies the section each lesson belongs in and the materials needed for each lesson.

This unit uses eleven student centers.

- Check it Off
- Find the Value of Expressions
- Shake and Spill
- Bingo
- What's Behind My Behind
- Make or Break Apart Numbers
- 5-frames
- Match Stories?
- Counting Collections
- Roll and Add
- Math Fingers

Unit 5: Composing and Decomposing Numbers to 10

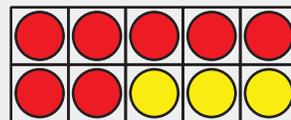
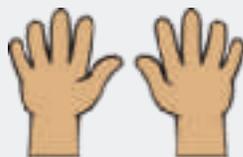
Unit Learning Goals

- Students compose and decompose numbers within 10.

In this unit, students explore different ways to compose and decompose numbers within 10 and to represent the compositions and decompositions.

Previously, students counted and compared groups and images of up to 10 objects. They solved addition and subtraction story problems and wrote expressions to represent the problems. Here, they use those experiences to compose and decompose numbers within 10. (The terms “make” or “break apart” are used with students.)

Special attention is given to composing and decomposing 10, as it is the basis of place value in our number system. To support their reasoning, students use their fingers and a 10-frame—created by putting together two 5-frames. They use these tools to think about pairs of numbers that make 10.



Symbolic notation develops slowly across the units. Students first complete expressions that represent numbers being composed and decomposed. In doing so, they also practice writing numbers without handwriting lines.

Later, students encounter equations of the form $5 = 3 + 2$. Teachers read this equation as “5 is 3 plus 2.” Note that the equations are written with the total on the left side of the equal sign and the addends on the right. Aside from representing composition and decomposition, this notation helps students see that the equal sign means that “both sides have the same value,” rather than “the answer comes next.” In a later unit, students will see equations with the addends on the left side.

The work here prepares students to make sense of teen numbers in the next unit and lays the groundwork for students to develop fluency with addition and subtraction facts within 10 in grade 1. (For example, to find the sum of $9 + 5$, they can decompose 5 into $1 + 4$ and find $9 + 1 + 4$ or $10 + 4$.) Much of the addition and subtraction work in future grades also hinges on the idea of composing and decomposing numbers, 10 in particular.

Section A: Make and Break Apart Numbers to 9

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2, K.OA.A.2, K.OA.A.3, K.OA.A.5

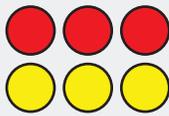
Building Towards K.OA.A.3, K.OA.A.5

Section Learning Goals

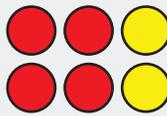
- Compose and decompose numbers up to 9 in more than 1 way.
- Write expressions to represent decompositions.

In this section, students compose and decompose numbers to 9. They work with physical objects, such as counters and connecting cubes, that can help to show ways to make and break apart numbers.

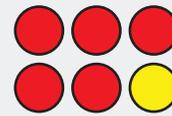
As they progress through the lessons, students come to understand that there are different ways to compose and decompose a given number. They write expressions to record compositions and decompositions.



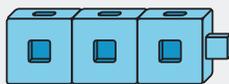
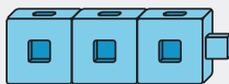
6 is 3 and 3



6 is 4 and 2

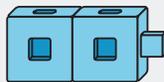
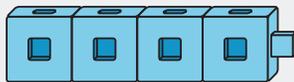


6 is 5 and 1



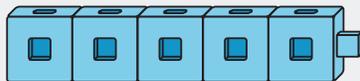
6 is 3 and 3

$3 + 3$



6 is 4 and 2

$4 + 2$



6 is 1 and 5

$1 + 5$

PLC: Lesson 2, Activity 2, Han's Pattern Block Design

Section B: More Types of Story Problems

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2, K.OA.A.1, K.OA.A.2, K.OA.A.3

Building Towards K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.5

Section Learning Goals

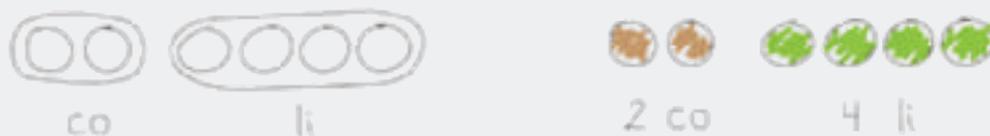
- Solve Put Together, Total Unknown, Put Together/Take Apart, Both Addends Unknown, Add To, Result Unknown, and Take From, Result Unknown story problems.

In this section, students represent and solve Put Together/Take Apart story problems—first where the total is unknown, and later where both addends are unknown. Students also see equations and learn the term for the first time.

*Jada made 6 paletas with her brother.
They made two flavors, lime and coconut.
How many of the paletas were lime?
Then how many of the paletas were coconut?*

Problems where both addends are unknown may be more challenging because there is no action in the story and more than one solution is possible. Students work to find multiple solutions but are not expected to find all the solutions in kindergarten.

To represent and solve story problems, students continue to use math tools and drawings, and to explain how their representation shows the story. They may use methods such as clearly separating the groups, using 2 colors, or using letter, word, and number labels to make their drawings easier for others to understand. Students also write expressions independently to record the solutions to the story problems.



Equations are introduced as a way to record the quantities and solutions in story problems. For instance, as a student explains a solution to the paleta problem, the teacher writes " $6 = 2 + 4$ " and says: "Jada made 6 paletas, 2 in coconut flavor and 4 in lime flavor. We can write that as 6 is 2 plus 4."

All equations in this unit are written with the total first (on the left side of the equal sign). Equations are read as "6 is 2 plus 4," rather than "6 equals 2 plus 4." Note that students are not expected to interpret equations at this time.

 PLC: Lesson 8, Activity 1, Citrus Juice

Section C: Make and Break Apart 10

Standards Alignments

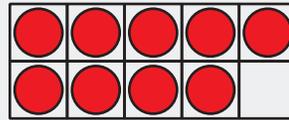
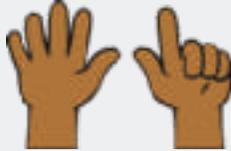
Addressing K.CC, K.CC.A.3, K.CC.B, K.CC.B.5, K.OA.A.1, K.OA.A.2, K.OA.A.3, K.OA.A.4
 Building Towards K.OA.A.2, K.OA.A.3, K.OA.A.4

Section Learning Goals

- For any number from 1 to 9, find the number that makes 10 when added to the given number.

This section focuses exclusively on composing and decomposing 10. This number is foundational to the understanding of place value and the work on numbers and operations in later grades.

Previously, students developed their understanding of the numbers 6–9 by relating it to 5 and using 5-frames. Here, students use a 10-frame—by putting together two 5-frames—and their fingers as tools to represent numbers and make and break apart 10 in different ways. The blank squares in the 10-frame and the fingers that are down allow students to see or count how many more are needed to make 10.



Throughout the section, students continue to build their familiarity with equations. They connect compositions and decompositions of 10 represented on their fingers and on 10-frames to addition equations and write missing numbers in such equations.

$$10 = 7 + 3$$

$$10 = 9 + 1$$

$$10 = \underline{\quad} + \underline{\quad}$$

Students are not expected to write equations independently in kindergarten. And although students may start to learn combinations that make 10 from memory, fluency with sums of 10 is not required until grade 1.

 PLC: Lesson 14, Activity 1, Introduce What's Behind My Back?, 10 Cubes

Throughout the Unit

Students describe and compare different ways to decompose numbers with math tools, expressions, and equations in Notice and Wonder and Which One Doesn't Belong routines throughout the unit. Students extend the verbal count sequence to 70 and continue to practice counting on from a given number in the Choral Count routine.

Since students have more experience with expressions, they participate in the Number Talk routine for the first time. This routine encourages students to use mental strategies and look for patterns in addition and subtraction expressions within 5.

Students are introduced to new centers that support the work of this unit. Centers to revisit from previous units are also suggested in each section. Feel free to incorporate other centers that have been previously introduced based on student need and interest.

In Activity 3, students participate in centers and often the activity synthesis focuses on habits of how students work in centers. Teachers may choose to complete the lesson synthesis, which is focused on the learning goal of the lesson, after Activity 2, before students transition to working in centers.

Materials Needed

LESSON	GATHER	COPY
A.1	<ul style="list-style-type: none"> ● Connecting cubes ● Materials from previous centers ● Number cards 0–10 	<ul style="list-style-type: none"> ● Check It Off Stage 1 Recording Sheet Kindergarten (groups of 1)
A.2	<ul style="list-style-type: none"> ● Crayons ● Materials from previous centers ● Pattern blocks 	<ul style="list-style-type: none"> ● none
A.3	<ul style="list-style-type: none"> ● Connecting cubes ● Crayons ● Materials from previous centers ● Pattern blocks ● Two-color counters 	<ul style="list-style-type: none"> ● What's Behind My Back Stage 1 Recording Sheet (groups of 1)
A.4	<ul style="list-style-type: none"> ● Connecting cubes ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● none
B.5	<ul style="list-style-type: none"> ● Connecting cubes ● Connecting cubes or two-color counters ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● Make or Break Apart Numbers Stage 1 Dot Page (groups of 2) ● Make or Break Apart Numbers Stage 1 Number Mat 4 - 9 (groups of 1) ● Make or Break Apart Numbers Stage 1 Recording Sheet (groups of 1)
B.6	<ul style="list-style-type: none"> ● Connecting cubes ● Connecting cubes or two-color counters ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● none

B.7	<ul style="list-style-type: none"> ● Connecting cubes or two-color counters ● Materials from previous centers 	<ul style="list-style-type: none"> ● Math Stories Stage 3 Pictures (groups of 8) ● Math Stories Stage 3 Recording Sheet (groups of 1)
B.8	<ul style="list-style-type: none"> ● Connecting cubes or two-color counters ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
B.9	<ul style="list-style-type: none"> ● Connecting cubes or two-color counters ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
C.10	<ul style="list-style-type: none"> ● Glue ● Materials from previous centers ● Scissors ● Two-color counters 	<ul style="list-style-type: none"> ● 5-Frames to Cut Out (groups of 1) ● Numbers on Fingers and 10-frames (groups of 1)
C.11	<ul style="list-style-type: none"> ● Crayons ● Materials from previous centers 	<ul style="list-style-type: none"> ● none
C.12	<ul style="list-style-type: none"> ● Cups ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● none
C.13	<ul style="list-style-type: none"> ● Connecting cubes ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● Math Fingers Stage 4 Recording Sheet (groups of 1) ● Number Mat 1–9 (groups of 2) ● 10-Frame Standard (groups of 1)
C.14	<ul style="list-style-type: none"> ● 10-frames ● Connecting cubes ● Materials from previous centers ● Two-color counters 	<ul style="list-style-type: none"> ● What's Behind My Back Stage 2 Recording Sheet Kindergarten (groups of 1)

C.15

- Connecting cubes
- Two-color counters
- Number Mat 4-10 (groups of 1)

Center: Check It Off (K–1)

Stage 1: Add within 10

Activities

- Kindergarten.5.A1.3 (addressing)
- Kindergarten.5.A2.3 (addressing)
- Kindergarten.5.A3.3 (addressing)
- Kindergarten.5.A4.3 (addressing)

Stage Narrative

Students take turns picking two number cards (0–5) to make and find the value of an addition expression. Students check off the number that represents the value of the sum (0–10) and then write the addition expression on the recording sheet.

This stage has two different recording sheets, one for kindergarten and another for grade 1. On the kindergarten recording sheet, students fill in blanks to record the expression. On the grade 1 recording sheet, students write in the full expression. Be sure to use the appropriate recording sheet with students.

Variation:

Students can roll two cubes (and treat 6 as a wild card) to provide visual support for each quantity.

Standards Alignments

Addressing 1.OA.C.5, 1.OA.C.6, K.OA.A.2

Materials to Gather

Number cards 0–10

Materials to Copy

Check It Off Stage 1 Recording Sheet Grade 1 (groups of 1), Check It Off Stage 1 Recording Sheet Grade K (groups of 1)

Center: Find the Value of Expressions (K)

Stage 1: Color the Total or Difference

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)

Stage Narrative

One partner chooses an expression card. The other partner finds the value of the expression. When both partners agree, they both color in that number on the recording sheet. All expressions have values within 10.

Standards Alignments

Addressing K.CC.A.3, K.OA.A.1, K.OA.A.2

Materials to Gather

Connecting cubes or two-color counters

Materials to Copy

Find the Value of Expressions within 10 Stage 1 Cards (groups of 2), Find the Value of Expressions within 10 Stage 1 Recording Sheet (groups of 1)

Center: Shake and Spill (K–2)

Stage 1: Count

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)
- Kindergarten.5.C10.3 (supporting)
- Kindergarten.5.C11.3 (supporting)
- Kindergarten.5.C12.3 (supporting)
- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students decide together how many counters to use (up to 10). They take turns shaking and spilling the counters. Both partners count the counters. Then, they choose a different number of counters and repeat.

Students may choose to use the 5-frame to organize the counters.

Standards Alignments

Addressing K.CC.B.4.b, K.CC.B.5

Materials to Gather

5-frames, Cups, Two-color counters

Additional Information

Each group of 2 needs a cup and 10 two-color counters.

Stage 2: Which Is More?

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)
- Kindergarten.5.C10.3 (supporting)
- Kindergarten.5.C11.3 (supporting)
- Kindergarten.5.C12.3 (supporting)
- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students decide together how many counters to use (up to 10). They take turns shaking and spilling the counters. They compare the number of red and yellow counters and describe their comparisons using the language “more than,” “fewer than,” and “the same as.”

Students may choose to use the 5-frame to organize the counters.

Standards Alignments

Addressing K.CC.C.6

Materials to Gather

5-frames, Cups, Two-color counters

Additional Information

Each group of 2 needs a cup and 10 two-color counters.

Stage 3: Represent

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)
- Kindergarten.5.C10.3 (supporting)
- Kindergarten.5.C11.3 (supporting)
- Kindergarten.5.C12.3 (supporting)
- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students decide together how many counters to use (up to 10). One partner spills the counters. Both partners represent the red and yellow counters on the recording sheet.

This stage has two different recording sheets, one for kindergarten and another for grade 1. Be sure to use the appropriate recording sheet with students.

Standards Alignments

Addressing 1.OA.C.6, K.CC.A.3, K.OA.A.1, K.OA.A.2

Materials to Gather

Crayons, Cups, Two-color counters

Materials to Copy

Shake and Spill Stage 3 Recording Sheet Grade 1 (groups of 1), Shake and Spill Stage 3 Recording Sheet Kindergarten (groups of 1)

Additional Information

Each group of 2 needs a cup and 10 two-color counters.

Center: Bingo (K)

Stage 1: Images

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)

Stage Narrative

One student chooses a card with an image and all students in the group can place a counter on their gameboard over a group that has the same number of images.

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Materials to Gather

Counters

Materials to Copy

Bingo Stage 1 Cards (groups of 4), Bingo Stages 1-3 Gameboard (groups of 4)

Stage 2: Images and Numbers

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)

Stage Narrative

One student chooses a number card and all students in the group can place a counter on their gameboard over a group that has that number of images.

Standards Alignments

Addressing K.CC.B.5, K.CC.C.6

Materials to Gather

Counters, Number cards 0–10

Materials to Copy

Bingo Stages 1-3 Gameboard (groups of 4)

Stage 3: Add and Cover

Activities

- Kindergarten.5.A1.3 (supporting)
- Kindergarten.5.A2.3 (supporting)
- Kindergarten.5.A3.3 (supporting)
- Kindergarten.5.A4.3 (supporting)

Stage Narrative

Students roll 2 cubes onto the dot mat. They find the total number of dots and cover any spaces on the gameboard with that number of images.

Standards Alignments

Addressing K.CC.B.5, K.OA.A.1

Materials to Gather

Connecting cubes, Two-color counters

Materials to Copy

Bingo Stages 1-3 Gameboard (groups of 4), Dot Mat 1-5 (dots and 5-frames) (groups of 2)

Center: What's Behind My Back (K-2)

Stage 1: Show 2 Parts

Activities

- Kindergarten.5.A3.1 (addressing)
- Kindergarten.5.A3.3 (addressing)
- Kindergarten.5.A4.3 (addressing)
- Kindergarten.5.B5.3 (addressing)
- Kindergarten.5.B6.3 (addressing)
- Kindergarten.5.B7.3 (addressing)
- Kindergarten.5.B8.3 (addressing)
- Kindergarten.5.B9.3 (addressing)
- Kindergarten.5.C14.3 (addressing)

Stage Narrative

Students begin with a tower of 5–10 connecting cubes. They break apart the tower and represent the two parts with a drawing and an expression.

Standards Alignments

Addressing K.OA.A.3

Materials to Gather

Connecting cubes, Crayons

Materials to Copy

What's Behind My Back Stage 1 Recording Sheet
(groups of 1)

Stage 2: 10 cubes

Activities

- Kindergarten.5.C14.1 (addressing)
- Kindergarten.5.C14.3 (addressing)

Stage Narrative

Students work with 10 cubes. One partner snaps the tower and puts one part behind their back and shows the other part to their partner. Their partner figures out how many cubes are behind their back.

This stage has two different recording sheets, one for kindergarten and another for grade 1. Be sure to use the appropriate recording sheet with students.

On the kindergarten recording sheet, students draw or color the connecting cube tower to show the two parts that the tower broke into and fill in an equation to show the total number of connecting cubes in the tower and the two parts that the tower was broken into.

On the grade 1 recording sheet, students record an addition equation with a blank to represent the missing cubes.

Standards Alignments

Addressing 1.OA.B.4, 1.OA.C.6, K.OA.A.4

Materials to Gather

10-frames, Connecting cubes

Materials to Copy

What's Behind My Back Stage 2 Recording Sheet
Grade 1 (groups of 1), What's Behind My Back
Stage 2 Recording Sheet Kindergarten (groups of 1)

Additional Information

Each group of 2 needs 10 connecting cubes.

Center: Make or Break Apart Numbers (K)

Stage 1: Numbers to 9

Activities

- Kindergarten.5.B5.3 (addressing)
- Kindergarten.5.B6.3 (addressing)
- Kindergarten.5.B7.3 (addressing)
- Kindergarten.5.B8.3 (addressing)
- Kindergarten.5.B9.3 (addressing)

Stage Narrative

Students roll to get a number from 4–9. They find two groups of dots that can be put together to make that number. Students write an expression to represent the two parts that make the number.

Standards Alignments

Addressing K.OA.A.1, K.OA.A.3

Materials to Gather

Connecting cubes, Two-color counters

Materials to Copy

Make or Break Apart Numbers Stage 1 Dot Page (groups of 2), Make or Break Apart Numbers Stage 1 Number Mat 4 - 9 (groups of 1), Make or Break Apart Numbers Stage 1 Recording Sheet (groups of 1)

Center: 5-frames (K)

Stage 1: Add

Activities

- Kindergarten.5.B5.3 (supporting)
- Kindergarten.5.B6.3 (supporting)
- Kindergarten.5.B7.3 (supporting)
- Kindergarten.5.B8.3 (supporting)
- Kindergarten.5.B9.3 (supporting)

Stage Narrative

Students begin with a full 5-frame and roll to see how many counters to add.

Standards Alignments

Addressing K.CC.B.5, K.OA.A.1

Materials to Gather

Connecting cubes, Counters

Materials to Copy

5-Frame (groups of 1), 5-frames Stages 1 and 2
Recording Sheet (groups of 1), Number Mat 1–5
(groups of 2)

Stage 2: Subtract

Activities

- Kindergarten.5.B5.3 (supporting)
- Kindergarten.5.B6.3 (supporting)
- Kindergarten.5.B7.3 (supporting)
- Kindergarten.5.B8.3 (supporting)
- Kindergarten.5.B9.3 (supporting)

Stage Narrative

Students begin with a full 5-frame and roll to see how many counters to take away.

Standards Alignments

Addressing K.CC.B.5, K.OA.A.1

Materials to Gather

Connecting cubes, Counters

Materials to Copy

5-Frame (groups of 1), 5-frames Stages 1 and 2
Recording Sheet (groups of 1), Number Mat 1–5
(groups of 2)

Center: Math Stories (K–2)

Stage 1: How Many?

Activities

- Kindergarten.5.B8.3 (supporting)
- Kindergarten.5.B9.3 (supporting)

Stage Narrative

Students ask and answer “how many” questions about pictures and represent the quantity with a number.

Variation:

Pages of picture books can also be offered to help students generate stories.

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5

Materials to Copy

Math Stories Stage 1 and 4 Pictures (groups of 8),
Math Stories Stage 1 Recording Sheet (groups of 2)

Stage 2: Act It Out

Activities

- Kindergarten.5.B8.3 (supporting)
- Kindergarten.5.B9.3 (supporting)

Stage Narrative

One student uses the background mat to tell a story that includes a question. The other student uses counters or connecting cubes to act out the story and answer the question. Both students draw a picture and write the answer to the story problem on their recording sheet.

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.OA.A.1, K.OA.A.2

Materials to Gather

Connecting cubes or two-color counters

Materials to Copy

Math Stories Stage 2 Backgrounds (groups of 6),
Math Stories Stage 2 Recording Sheet (groups of 2)

Stage 3: How Many of Each?

Activities

- Kindergarten.5.B7.3 (addressing)
- Kindergarten.5.B8.3 (addressing)
- Kindergarten.5.B9.3 (addressing)

Stage Narrative

One student tells a story based on a picture. The other student uses objects or drawings to represent the story. Then students switch roles and use the same picture to tell a different story. After telling two stories about the same picture, students choose another picture and repeat.

Standards Alignments

Addressing K.OA.A.2, K.OA.A.3

Materials to Gather

Connecting cubes or two-color counters

Materials to Copy

Math Stories Stage 3 Pictures (groups of 8), Math Stories Stage 3 Recording Sheet (groups of 1)

Center: Counting Collections (K-1)

Stage 1: Up to 20

Activities

- Kindergarten.5.C10.3 (supporting)
- Kindergarten.5.C11.3 (supporting)
- Kindergarten.5.C12.3 (supporting)
- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students are given a collection of up to 20 objects. They work with a partner to figure out how many objects are in their collection and then each partner shows how many. Students may draw pictures or write numbers to represent their collection.

Variation:

In kindergarten, teachers may not want to provide a recording sheet, so that students can explain their count orally.

Standards Alignments

Addressing K.CC.B

Materials to Gather

10-frames, 5-frames, Collections of objects

Materials to Copy

Counting Collections Stages 1 and 2 Recording Sheet (groups of 1)

Additional Information

Create a collection of up to 20 objects per group of 2 students (buttons, two-color counters, linking cubes, paper clips, pattern blocks, square tiles).

Center: Roll and Add (K)

Stage 1: Dots

Activities

- Kindergarten.5.C10.3 (supporting)
- Kindergarten.5.C11.3 (supporting)
- Kindergarten.5.C12.3 (supporting)
- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students use a mat with dot images. Students write a number to record the total.

Standards Alignments

Addressing K.CC.B.5, K.OA.A.2

Materials to Gather

Connecting cubes

Materials to Copy

Roll and Add Stage 1 Dot Images Mat (groups of 1),
Roll and Add Stage 1 Recording Sheet (groups of 1)

Stage 2: Addition Expressions

Activities

- Kindergarten.5.C10.3 (supporting)
- Kindergarten.5.C11.3 (supporting)
- Kindergarten.5.C12.3 (supporting)
- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students roll a cube onto a mat with numbers 1–5. Students fill in an expression with the two numbers they land on and find the value of the expression.

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

Materials to Gather

Connecting cubes or two-color counters

Materials to Copy

Number Mat 1–5 (groups of 2), Roll and Add Stage
2 Recording Sheet (groups of 1)

Center: Math Fingers (K)

Stage 1: Show and Say

Activities

- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students choose a card. One partner shows the same number of fingers as the card and the other partner says the number of fingers shown.

Standards Alignments

Addressing K.CC

Materials to Copy

Math Fingers Cards (groups of 2)

Stage 2: Fewer or More

Activities

- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Students choose a card. One partner uses their fingers to show a quantity that is fewer than the fingers on the card. The other partner uses their fingers to show a quantity that is more.

Standards Alignments

Addressing K.CC.C.6

Materials to Copy

Math Fingers Cards (groups of 2)

Stage 3: Add 2 Hands

Activities

- Kindergarten.5.C13.3 (supporting)
- Kindergarten.5.C14.3 (supporting)

Stage Narrative

Each partner holds up some fingers on one hand. Partners work together to figure out how many fingers are up altogether.

Standards Alignments

Addressing K.CC.A.3, K.CC.B.5, K.OA.A.1

Materials to Copy

Math Fingers Stage 3 Recording Sheet (groups of 1)

Stage 4: Make 10

Activities

- Kindergarten.5.C13.1 (addressing)
- Kindergarten.5.C13.3 (addressing)
- Kindergarten.5.C14.3 (addressing)

Stage Narrative

One partner rolls the cube on the mat and shows that number of fingers. The other partner determines how many more fingers are needed to make 10. Both partners fill in an equation to show the 2 parts that make 10.

Standards Alignments

Addressing K.OA.A.4

Materials to Gather

Connecting cubes

Materials to Copy

Math Fingers Stage 4 Recording Sheet (groups of 1), Number Mat 1–9 (groups of 2)

Section A: Make and Break Apart Numbers to 9

Lesson 1: Make 2 Parts

Standards Alignments

Addressing K.OA.A.2, K.OA.A.3, K.OA.A.5

Building Towards K.OA.A.3, K.OA.A.5

Teacher-facing Learning Goals

- Compose and decompose numbers up to 9.
- Understand that numbers can be decomposed into parts in different ways.

Student-facing Learning Goals

- Let's break numbers up into parts.

Lesson Purpose

The purpose of this lesson is for students to compose and decompose numbers up to 9 and understand that numbers can be composed and decomposed in more than one way.

In the first activity, students identify that the total number of connecting cubes stays the same when decomposed into 2 parts. In the second activity, students discuss that the same number of objects can be decomposed into 2 parts in more than one way.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Materials to Copy

- Check It Off Stage 1 Recording Sheet
Kindergarten (groups of 1): Activity 3

- Number cards 0–10: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Teacher Reflection Question

What was the best question you asked students today? Why would you consider it the best one based on what students said or did?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 5, Section A Checkpoint

Standards Alignments

Addressing K.OA.A.3

Student-facing Task Statement

Lesson observations

Student Responses

- Understand that numbers can be composed or decomposed in different ways.

----- Begin Lesson -----

Warm-up

 10 min

Notice and Wonder: 2 Pictures

Standards Alignments

Building Towards K.OA.A.3

The purpose of this warm-up is to elicit the idea that numbers can be broken into parts, which will be useful in upcoming activities. While students may notice and wonder many things about these images, the fact that they have the same number of shapes, but one is separated into 2 parts is the important discussion point.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?



Student Responses

Students may notice:

- Both pictures have 5 shapes.
- There is a space in the second picture.
- They are all squares.

Students may wonder:

- Why is there a space in the second picture?
- How many shapes are there?
- Why are these squares sideways?

Launch

- Groups of 2
- Display the image.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “What is the same about these pictures? What is different?” (They both have 5. The first picture is 1 big group but the second picture is 2 groups.)

Activity 1

🕒 10 min

6 Connecting Cubes

Standards Alignments

Addressing K.OA.A.3, K.OA.A.5

The purpose of this activity is for students to decompose 6 into 2 parts. Students see that the total number of cubes remains the same when it is decomposed into 2 parts. Although students may notice that they can do this in different ways, that idea is not the focus until the next activity.

Access for English Learners

MLR8 Discussion Supports. Display and encourage students to use the following sentence frames: “I have ____ cubes in my hand”, “I have ____ cubes on my desk,” and “I have ____ cubes altogether.”
Advances: Speaking, Reading, Representing

Materials to Gather

Connecting cubes

Required Preparation

- Each student needs 6 connecting cubes.

Student Responses

Sample responses:

- Students put 3 cubes in their hand and 3 cubes on the table.
- Students put 1 cube in their hand and 5 cubes on the table.

Launch

- Groups of 2
- Give each student 6 connecting cubes.

Activity

- “You have 6 cubes. Put some of the cubes in your hand and some on your desk.”
- 30 seconds: independent work time
- “Tell your partner how many cubes are in your hand. Show them the cubes.”
- “Tell your partner how many cubes are on your desk. Show them the cubes.”
- “Tell your partner how many cubes you have altogether.”

Synthesis

- Invite a student to share.
- “How many cubes did you have in your hand? How many cubes were on your desk?”
- Write an expression to represent the parts.

- “How many cubes did you have in all?” (6)
- “The total number of cubes stays the same when we break them up into 2 parts.”

Activity 2

🕒 10 min

Diego’s and Lin’s Connecting Cubes

Standards Alignments

Building Towards K.OA.A.3, K.OA.A.5

The purpose of this activity is for students to see that numbers can be decomposed in different ways. Students analyze two different ways that 4 cubes are decomposed into two groups. They determine that although they are decomposed into different-sized parts, they both represent a total of 4.

🕒 Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Give students access to 5-frames so that they can place connecting cubes in them in order to verify the number of cubes they have in all. Invite students to use the 5-frames to help them keep track of the total number of cubes.

Supports accessibility for: Organization, Conceptual Processing

Materials to Gather

Connecting cubes

Student-facing Task Statement

Diego’s cubes

Launch

- Groups of 2
- Give students access to connecting cubes.
- “Diego and Lin also put some cubes in their hands and some on their desks. Diego has 3 in his hand and 1 on his desk. He says he has 4 cubes altogether. Lin has 2 in her hand and 2 on her desk. She also says she has 4 cubes total. Can they both have 4



Lin's cubes



Student Responses

Sample response:

- Yes they can both have 4 cubes altogether, they just broke them up in different ways. 2 and 2 is 4 and 3 and 1 is 4.

cubes altogether?"

Activity

- 3 minutes: partner discussion
- Monitor for students who count the groups to determine that both students have 4 even though they are broken into different parts.

Synthesis

- "Do Diego and Lin both have 4 cubes?"
- Invite previously identified students to share.
- "What parts did Diego break 4 into? (3 and 1)"
- Write $3 + 1$.
- "What parts did Lin break 4 into?" (2 and 2)
- Write $2 + 2$.
- "Diego and Lin showed us that we can break numbers apart in different ways."

Activity 3

🕒 25 min

Introduce Check It Off, Add Within 10

Standards Alignments

Addressing K.O.A.2

The purpose of this activity is for students to learn stage 1 of the Check It Off center. Students take turns picking two number cards (0–5) to make and find the value of an addition expression. Students check off the total and then write the addition expression on the recording sheet.

After they participate in the center, students choose from any stage of previously introduced centers.

- Find the Value of Expressions
- Bingo
- Shake and Spill

Students will choose from these centers throughout the section. Keep materials from these centers organized to use each day.

Materials to Gather

Materials from previous centers, Number cards 0–10

Materials to Copy

Check It Off Stage 1 Recording Sheet
Kindergarten (groups of 1)

Required Preparation

- Gather materials from:
 - Find the Value of Expressions, Stage 1
 - Bingo, Stages 1–3
 - Shake and Spill, Stages 1–3

Student-facing Task Statement

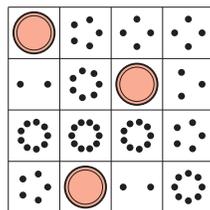
Choose a center.

Check it Off



Find the Value of Expressions

Bingo



Shake and Spill

Launch

- Groups of 2
- Give each group of students a set of number cards and each student a recording sheet.
- “We are going to learn a center called Check It Off. You and your partner will take turns choosing two number cards. Find the total of the two numbers, and check off the total on your recording sheet. Then fill in an expression.”

Activity

- 10 minutes: partner work time

$$\boxed{3+5} \quad \boxed{7-5}$$



- “Now you can choose another center. You can also continue playing Check It Off.”
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- “Choose 1 expression that you wrote on your recording sheet. Tell your partner how you can find the value of that expression.”

Lesson Synthesis

🕒 5 min

“Today we noticed that if we break a group of objects into 2 parts, we still have the same number of objects.”

Display 5 connecting cubes.

“How many cubes are there altogether?” (5)

Separate the connecting cubes into a group of 1 and a group of 4.

“How many cubes are there altogether?” (5)

“How many cubes are in each part?” (1 and 4)

Write “1 + 4”.

“There are 5 cubes. 5 is 1 + 4.”

Lesson 2: Make and Break Apart Pattern Block Designs

Standards Alignments

Addressing K.OA.A.3

Teacher-facing Learning Goals

- Compose and decompose numbers up to 9.

Student-facing Learning Goals

- Let's make and break apart pattern block designs.

Lesson Purpose

The purpose of this lesson is for students to compose and decompose numbers up to 9 in more than 1 way.

In a previous unit, students made designs with pattern blocks and counted how many of each pattern block they used. In this lesson, students make and share a design with the same total number of pattern blocks but different numbers of individual pattern blocks.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- Crayons: Activity 1
- Materials from previous centers: Activity 3
- Pattern blocks: Activity 1, Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

Identify who has been sharing their ideas in class lately. Make a note of students whose ideas have not been shared and look for an opportunity for them to share their thinking in

Activity 2	10 min	tomorrow's lesson.
Activity 3	20 min	
Lesson Synthesis	10 min	

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 5, Section A Checkpoint

Standards Alignments

Addressing K.OA.A.3

Student-facing Task Statement

Lesson observations

Student Responses

- Compose and decompose numbers up to 9 in more than 1 way.
- Represent decompositions with objects, drawings, and expressions.

Begin Lesson

Warm-up

🕒 10 min

Which One Doesn't Belong: Pattern Block Designs

Standards Alignments

Addressing K.OA.A.3

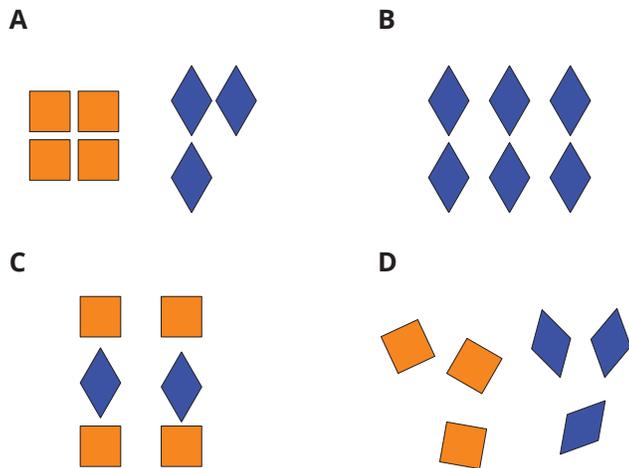
This warm-up prompts students to compare four designs of pattern blocks. It draws students' attention to the total number of pattern blocks in a design and the numbers of shapes within each group in the design, which will be useful when students create and compare pattern block designs in upcoming activities. This activity gives students a reason to attend to the features of each representation and to use language precisely (MP6).

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?



Student Responses

Sample responses:

- A doesn't belong because it is the only one that doesn't have 6 shapes.
- B doesn't belong because it is the only one that doesn't have any squares.
- C doesn't belong because it is the only one that doesn't have all the squares together.
- D doesn't belong because it is the only one that isn't organized in rows.

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2-3 minutes: partner discussion
- Record responses.

Synthesis

- "Let's find at least one reason why each one doesn't belong."

Activity 1

🕒 10 min

Create Pattern Blocks Designs

Standards Alignments

Addressing K.O.A.A.3

The purpose of this activity is for students to compose a group of 7 objects and identify the parts and total in the design. In the activity synthesis, students share their designs and discuss that while the total number of pattern blocks stays the same, the numbers of each type of pattern block changes. As students share, the teacher records an expression to represent the parts in each design.

Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the question, “What is the same and what is different?” This gives both students an opportunity to produce language.

Advances: Conversing

Materials to Gather

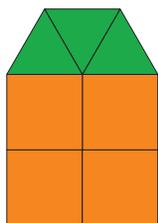
Crayons, Pattern blocks

Student-facing Task Statement



Student Responses

Sample response:



3 triangles, 4 squares

Launch

- Groups of 2
- Give students pattern blocks and crayons.
- “Create a design with 7 pattern blocks. Use only green triangles and orange squares. Draw a picture of your design and write numbers to show how many green triangles and how many orange squares you used.”

Activity

- 3 minutes: independent work time
- Monitor for students who use different numbers of triangles and squares to create a design with 7 pattern blocks.
- “Share your design with your partner. Tell them how many green triangles you used, how many orange squares you used, and how many pattern blocks you used altogether.”
- 2 minutes: partner discussion

Synthesis

- Invite 2–3 students who used different numbers of squares and triangles to share their designs.
- “What parts do you see in ____’s design?” (There is a group of 5 green triangles. There is a group of 2 orange squares.)
- As students share, record each design with an expression. For example:
- “In the past, we used expressions to show when something was added or taken away. We can also write an expression to show the parts that we see. This design has 7 pattern blocks, 5 green triangles and 2 orange squares. I can write that as $5 + 2$.”
- “What is the same about each design? What is different?” (They each have 7 pattern blocks. They each have only squares and triangles. The designs look different. They used different numbers of squares and triangles.)
- If needed, say “Each design had 7 pattern blocks, but they used different numbers of green triangles and orange squares. There were still 7 pattern blocks.”

Activity 2

Han’s Pattern Block Design

 10 min

 PLC Activity

Standards Alignments

Addressing K.OA.A.3

The purpose of this activity is for students to see 8 pattern blocks broken into 2 parts in multiple ways. Students represent each pattern block design with an expression. When students write an

expression to represent the pattern blocks they reason abstractly and quantitatively (MP2).

Access for Students with Disabilities

Representation: Access for Perception. Students with color blindness will benefit from verbal emphasis, gestures, or labeled displays to distinguish between the different colors of pattern blocks.

Supports accessibility for: Visual-Spatial Processing

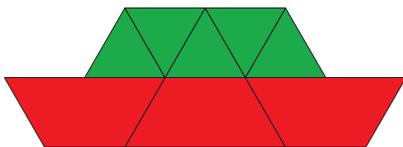
Materials to Gather

Pattern blocks

Student-facing Task Statement

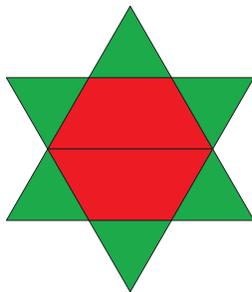
Han used 8 pattern blocks.

1.



Expression: _____

2.



Expression: _____

3.

Launch

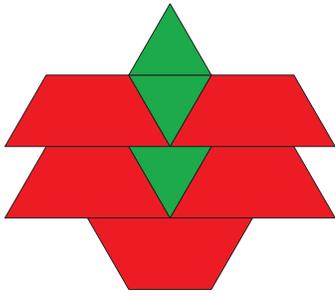
- Groups of 2
- Give students pattern blocks.
- “Make another design with 7 pattern blocks, using only green triangles and orange squares. Use a different number of orange squares and green triangles than you did in the previous activity.”
- 2 minutes: independent work time
- “Share your design with your partner. Tell your partner how many pattern blocks you used altogether, and how many green triangles and orange squares you used.”
- 2 minutes: partner discussion.
- “Here are some pattern block designs that Han made with 8 pattern blocks. Write an expression to show how many green triangles and red trapezoids he used in each design.”

Activity

- 3 minutes: partner work time

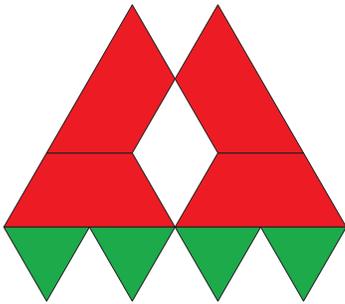
Synthesis

- “What are the different ways to make 8 that you found in the designs?” (5 and 3, 4 and



Expression: _____

4.



Expression: _____

Student Responses

1. $5 + 3$
2. $6 + 2$
3. $5 + 3$
4. $4 + 4$

4, 6 and 2)

- Display the first and third designs.
- “What is the same about these designs? What is different?” (They both show 5 and 3. They both have 8 pattern blocks. One used more red trapezoids and one used more green triangles.)

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with addition and subtraction.

Students choose from any stage of previously introduced centers.

- Check It Off
- Find the Value of Expressions
- Bingo
- Shake and Spill

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Check It Off, Stage 1
 - Find the Value of Expressions, Stage 1
 - Bingo, Stages 1–3
 - Shake and Spill, Stages 1–3

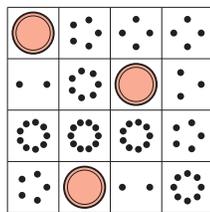
Student-facing Task Statement

Choose a center.

Check it Off



Bingo



Find the Value of Expressions



Shake and Spill



Launch

- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- “Choose what you would like to do next.”
- 8 minutes: center work time

Synthesis

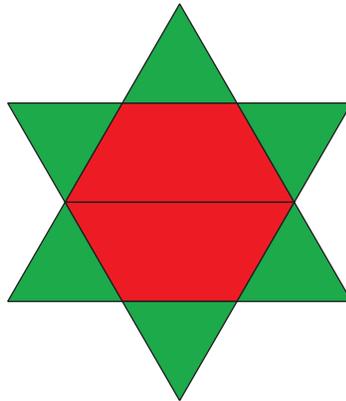
- Display 4 red counters and 2 yellow counters.

- “Andre was playing Shake and Spill and this is what his counters looked like. What are the two parts that you see in the counters?” (4 and 2)
- “If Andre shakes and spills 6 counters again, what is a different way that his counters could look?” (3 red and 3 yellow, 5 red and 1 yellow)

Lesson Synthesis

🕒 10 min

Display this pattern block design from Activity 2:



“How many pattern blocks are in this design?” (8)

“What parts do you see in this design?” (6 green triangles, 2 red trapezoids)

“One way that we can break apart 8 is 6 and 2. 8 is $6 + 2$.”

“What can we change about the design to show a different way to break apart 8?” (Sample response: You could take away one red trapezoid and add one green triangle. Then it would show 7 and 1.)

Invite students to share and demonstrate student suggestions.

Lesson 3: Snap the Cubes

Standards Alignments

Addressing K.OA.A.3

Teacher-facing Learning Goals

- Compose and decompose numbers up to 9.

Student-facing Learning Goals

- Let's find different ways to break apart numbers.

Lesson Purpose

The purpose of this lesson is for students to find multiple decompositions of a number and look for patterns in decompositions.

In previous lessons, students have composed and decomposed numbers and noticed that numbers can be composed and decomposed in more than one way. In this lesson, students decompose numbers in more than one way. In the first activity, students do this by snapping a tower of connecting cubes into 2 parts in different ways. In the second activity, students are given a written number rather than objects. Decomposing a number into parts in different ways deepens their understanding of numbers and their relationships (MP7).

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1, Activity 2
- Crayons: Activity 1
- Materials from previous centers: Activity 3
- Pattern blocks: Activity 2

Materials to Copy

- What's Behind My Back Stage 1 Recording Sheet (groups of 1): Activity 1

- Two-color counters: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min
Cool-down	5 min

Teacher Reflection Question

In a future section, students will find more than one solution to a Put Together/Take Apart, Both Adds Unknown story problems. What do you notice in their work from today's lesson that you might leverage in that future lesson?

Cool-down (to be completed at the end of the lesson)

🕒 5 min

Break Apart 6

Standards Alignments

Addressing K.OA.A.3

Student-facing Task Statement

Show 2 ways to break apart 6 into 2 parts.
Show your thinking using objects, drawings, numbers, or words.

Student Responses

Sample responses:
3 and 3, 5 and 1

----- Begin Lesson -----

Warm-up

🕒 10 min

Notice and Wonder: Connecting Cube Towers

Standards Alignments

Addressing K.OA.A.3

The purpose of this warm-up is to elicit the idea that quantities can be broken apart in different ways, which will be useful when students decompose connecting cube towers in multiple ways in a later activity. While students may notice and wonder many things about these images, the total number of cubes remaining the same while the size of the two parts changes is the important discussion point.

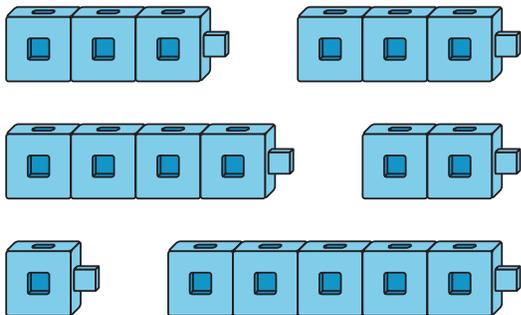
Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?



Student Responses

Students may notice:

- There are connecting cubes.
- The towers look like they are broken into 2 pieces.
- There are 6 connecting cubes in each image.

Students may wonder:

- Why are all of the connecting cube towers broken?
- Why aren't there the same number of cubes in each smaller tower?

Launch

- Groups of 2
- Display the image or use connecting cubes.
- "What do you notice? What do you wonder?"
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- "What is the same about each set of cubes?" (They each have 6 connecting cubes.)

Activity 1

 10 min

Introduce What's Behind My Back, Show 2 Parts

Standards Alignments

Addressing K.O.A.A.3

The purpose of this activity is for students to learn stage 1 of the What's Behind My Back center. Students find multiple decompositions of a number. Students snap a tower of connecting cubes into 2 parts and record each decomposition with a drawing and an expression. It may be helpful to give each group of students a single color of connecting cubes so the color of the cubes doesn't distract students from identifying the two parts. In future stages of this center students hide cubes behind their back after snapping a tower. If needed, you can choose not to use the name What's Behind My Back when playing this stage or let students know they will do that in future stages of this center.

The recording sheet is printed in the student book for this activity. There is a Instructional master available for students to use during centers in future activities and lessons.

When students write an expression to match the connecting cubes, they reason abstractly and quantitatively (MP2).

Access for English Learners

MLR8 Discussion Supports. Display and read aloud the following sentence frame to support small-group discussion: "You broke your tower into a group of ____ and a group of ____." invite students to chorally repeat this sentence in unison 1–2 times.

Advances: Speaking, Conversing, Representing

Materials to Gather

Connecting cubes, Crayons

Materials to Copy

What's Behind My Back Stage 1 Recording Sheet (groups of 1)

Required Preparation

- Each group of 2 needs 8 connecting cubes of the same color.

Student-facing Task Statement

8 cubes

Launch

- Groups of 2


expression: _____

expression: _____

expression: _____

expression: _____

8 cubes


expression: _____

expression: _____

expression: _____

expression: _____

expression: _____

- Give each group of students at least 8 connecting cubes and access to 2 different color crayons.
- “We are going to learn a center called What’s Behind My Back?”
- Display a cube tower with 8 cubes.
- “Start with a tower of 8 cubes. One partner breaks the tower into 2 parts.”
- Demonstrate breaking the tower into 2 parts.
- “The other partner describes what happened to the tower. Tell your partner what happened to my tower.” (You broke your tower into a group of 5 and a group of 3.)
- 30 seconds: partner discussion
- Share responses.
- “Both partners record the two parts with a drawing and an expression.”
- Demonstrate completing the recording sheet with a drawing and an expression.
- “Then put your tower back together, and play again. Take turns snapping the tower of 8 cubes into 2 parts.”

Activity

- 5 minutes: partner work time

Synthesis

- “What did you notice each time you snapped the tower?” (There were always 8 cubes. The 2 parts that we broke the tower into were different each time.)
- “What are the different ways that you and your partner found to break the tower of 8 cubes into 2 parts?”
- Display a tower of 2 and a tower of 6.
- “What expression can we write to represent the 2 parts of this tower?” ($2 + 6$)

Student Responses

Sample responses:

- Students break the tower into 3 and 5 and write $3 + 5$.
- Students break the tower into 7 and 1 and write $7 + 1$.
- Students break the tower into 4 and 4 and write $4 + 4$.

Advancing Student Thinking

If students snap the cubes the same way each time, consider asking:

- “Are there any other ways that you can snap the tower into 2 parts?”
- “What if you snapped only 1 cube off of the tower?”

Activity 2

🕒 10 min

More Than One Way

Standards Alignments

Addressing K.O.A.A.3

The purpose of this activity is for students to decompose numbers in more than one way. This is the first time that students begin with written numbers rather than a group of objects. Students may use objects such as connecting cubes to represent each number and find different ways to decompose the number into two parts.

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Check for understanding by inviting students to rephrase directions in their own words.

Supports accessibility for: Memory, Organization

Materials to Gather

Connecting cubes, Pattern blocks, Two-color counters

Student-facing Task Statement

4
9
6
7
5
8

Student Responses

Students use objects, drawings, numbers, or expressions to show different ways to decompose each number.

Sample responses:

- 4: 3 and 1, 2 and 2
- 9: 7 and 2, 6 and 3
- 6: 1 and 5, 3 and 3
- 7: 5 and 2, 3 and 4
- 5: 1 and 4, 2 and 3
- 8: 7 and 1, 4 and 4

Launch

- Groups of 2
- Give each group of students access to connecting cubes, pattern blocks, and two-color counters.
- “In previous activities, we have used math tools like connecting cubes and pattern blocks to show different ways to break apart numbers into 2 parts. Use your connecting cubes to show one way to break apart 5 into 2 parts.”
- 1 minute: independent work time
- “Now use the connecting cubes to show a different way to break apart 5 into 2 parts.”
- 1 minute: independent work time
- “Show more than 1 way to break apart each number into 2 parts. Show your thinking using objects, drawings, numbers, or words.”

Activity

- 4 minutes: independent work time
- “Share your work with your partner. Did you both show the same ways to break apart each number?”
- 2 minutes: partner discussion

Synthesis

- “Which tool(s) did you use to help you find different ways to break apart numbers into two parts? How did each tool help you?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with addition and subtraction.

Students choose from any stage of previously introduced centers.

- What's Behind My Back?
- Check It Off
- Find the Value of Expressions
- Bingo
- Shake and Spill

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - What's Behind My Back?, Stage 1
 - Check It Off, Stage 1
 - Find the Value of Expressions, Stage 1
 - Bingo, Stages 1–3
 - Shake and Spill, Stages 1–3

Student-facing Task Statement

Choose a center.

What's Behind My Back? Check it Off

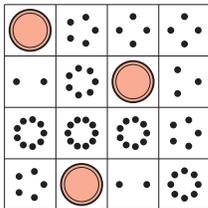


Launch

- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time



Bingo



Shake and Spill



Find the Value of Expressions

$$3 + 5 \quad 7 - 5$$

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

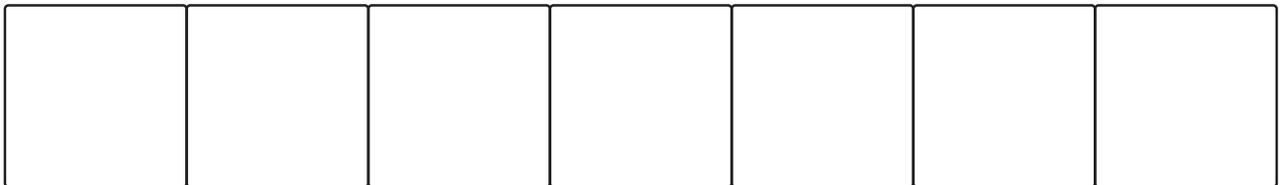
Synthesis

- "Tell your partner one thing you noticed about how they worked in centers today."

Lesson Synthesis

5 min

Display a tower of 7 connecting cubes or draw an image of one:

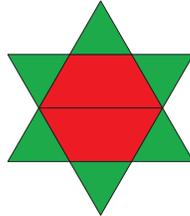


"Jada made a tower with 7 connecting cubes. What are 2 ways that she could break the tower into 2 parts? How do you know?" (Sample response: She can break off 2 cubes. Then she would have 2 cubes and 5 cubes.)

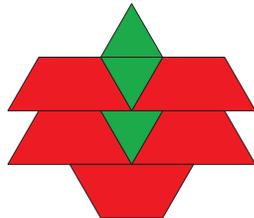
Share and record responses. Record each student's decomposition with an expression.

Student Section Summary

In this section, we used objects to make and break apart numbers in different ways.

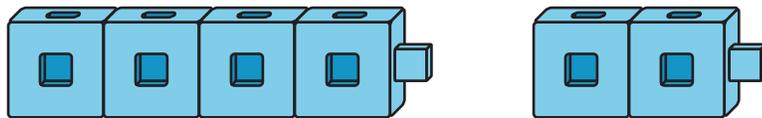


There are 8 pattern blocks.
There are 2 red trapezoids and 6 green triangles.

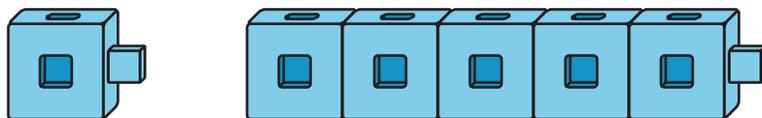


There are 8 pattern blocks.
There are 3 green triangles and 5 red trapezoids.

We wrote expressions to show different ways to make and break apart numbers.



There are 6 connecting cubes.
6 is $4 + 2$.



There are 6 connecting cubes.
6 is $1 + 5$.

----- Complete Cool-Down -----

Response to Student Thinking

Students only show one way to decompose 6 into 2 parts.

Next Day Support

- During the launch of the next day's lesson, give students connecting cubes and have them work in partners to show and record different ways to decompose 6.

Lesson 4: Find All the Ways (Optional)

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2, K.OA.A.3

Teacher-facing Learning Goals

- Compose and decompose numbers up to 9.
- Find all the ways to decompose a number.

Student-facing Learning Goals

- Let's find all the ways to break apart a number.

Lesson Purpose

The purpose of this lesson is for students to find all the ways to decompose a number.

This lesson is optional because finding all of the ways to decompose a number is not an expectation of the kindergarten standards. Students look for and make use of structure (MP7) as they use the patterns in decompositions to help them find all the possible ways to decompose a number.

Access for:

Students with Disabilities

- Engagement (Activity 3)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1, Activity 2
- Materials from previous centers: Activity 3
- Two-color counters: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

What part of the lesson went well today in terms of students' learning? What did you do that made that part go well?

Activity 2	15 min
Activity 3	20 min
Lesson Synthesis	5 min

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 5, Section A Checkpoint

Standards Alignments

Addressing K.OA.A.3

Student-facing Task Statement

Lesson observations

Student Responses

- Compose and decompose numbers up to 9 in more than 1 way.
- Represent decompositions with objects, drawings, and expressions.

Begin Lesson

Warm-up

🕒 10 min

Choral Count: Count On

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2

The purpose of this warm-up is to count on from a given number. As students count, point to the numbers posted so that students can follow along.

Instructional Routines

Choral Count

Student Responses

Sample responses:

- I know that 10 comes after 9 so that's what I said next.
- I counted from 1 in my head first to help me remember what number comes next.

Launch

- "Let's count to 60."
- Count to 60.

Activity

- "Now, start at the number 9 and count to 20."
- Count on from 9 to 20.
- Repeat 3–4 times starting with other numbers within 10.

Synthesis

- "How did you know what number to say after 9?"
- "We can start counting at numbers other than 1. When we count on, we think about what number comes next when we count."

Activity 1

🕒 10 min

Patterns in Decompositions

Standards Alignments

Addressing K.OA.A.3

The purpose of this activity is to look for patterns in decompositions. The decompositions in the activity are presented in a way to encourage students to look for patterns, such as one addend getting larger while the other gets smaller, and use this information to determine if there are other possible decompositions. When students look for patterns, they look for and make use of structure (MP7). When they write expressions to represent diagrams they reason abstractly and quantitatively (MP2).

Access for English Learners

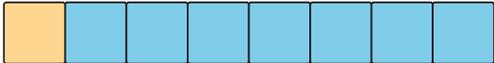
MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the question, “What pattern do you notice?” This gives both students an opportunity to produce language.

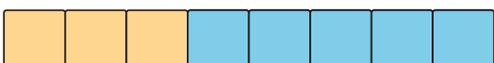
Advances: Conversing

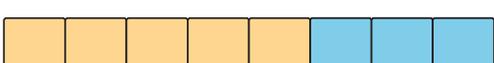
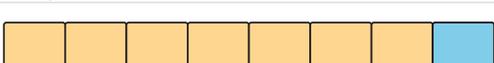
Materials to Gather

Connecting cubes

Student-facing Task Statement


expression: _____

expression: _____

expression: _____

expression: _____

expression: _____

expression: _____

Student Responses

- $1 + 7$
- $2 + 6$
- $3 + 5$
- $4 + 4$

Launch

- Groups of 2
- Give students access to connecting cubes.
- “Andre and Priya snapped a tower with 8 cubes. They used 2 different colors to show how they broke their tower each time. Write an expression to represent the 2 parts that they snapped each tower into.”
- 2 minutes: partner work time
- “Look at the cubes and the expressions. What patterns do you notice?” (There are more yellow each time. There is 1 more yellow and 1 fewer blue each time. The first number in the expression is getting bigger)

Activity

- 3 minutes: partner discussion

Synthesis

- “Did Andre and Priya find all of the ways to break apart the tower of 8 cubes? What makes you think that?” (They could have broken the tower into 6 yellow and 2 blue.)

- $5 + 3$
- $7 + 1$

Activity 2

🕒 15 min

Find All the Ways

Standards Alignments

Addressing K.OA.A.3

The purpose of this activity is for students to find all the different decompositions of 7.

Materials to Gather

Connecting cubes, Two-color counters

Student-facing Task Statement

Find all the different ways you can break apart 7 into 2 parts.

Show your thinking using objects, drawings, numbers, or words.

Student Responses

$$0 + 7$$

$$1 + 6$$

$$2 + 5$$

$$3 + 4$$

$$4 + 3$$

$$5 + 2$$

$$6 + 1$$

Launch

- Groups of 2
- Give groups access to connecting cubes and two-color counters.
- “Find all the different ways you can break apart 7 into 2 parts. Show your thinking using objects, drawings, numbers, or words.”

Activity

- 5 minutes: partner work time
- “If you haven’t already, write an expression to show each way that you broke apart 7.”
- 2 minutes: partner work time

Synthesis

- Invite 2–3 groups to share.

$7 + 0$

- “How do you know you found all the ways to break apart 7?”
- “Did anyone find another way to break apart 7?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with addition and subtraction.

Students choose from any stage of previously introduced centers.

- What’s Behind My Back?
- Check It Off
- Find the Value of Expressions
- Bingo
- Shake and Spill

🕒 Access for Students with Disabilities

Engagement: Provide Access by Recruiting Interest. Use visible timers or audible alerts to help learners anticipate and prepare to transition between activities.

Supports accessibility for: Social-Emotional Functioning, Organization

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - What’s Behind My Back?, Stage 1
 - Check It Off, Stage 1
 - Find the Value of Expressions, Stage 1
 - Bingo, Stages 1–3

- Shake and Spill, Stages 1–3

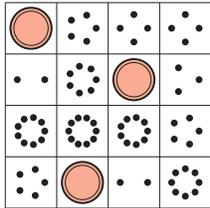
Student-facing Task Statement

Choose a center.

What's Behind My Back? Check it Off



Bingo



Find the Value of Expressions

$$3 + 5 \quad 7 - 5$$

Shake and Spill



Launch

- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- "Choose what you would like to do next."
- 8 minutes: center work time

Synthesis

- "What is one thing from your work in centers today that you would like to continue to get better at?"

Lesson Synthesis

🕒 5 min

"Today we looked for patterns to help us find all of the different ways to break apart numbers."

Section B: More Types of Story Problems

Lesson 5: Put Together

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

Building Towards K.OA.A.1, K.OA.A.2

Teacher-facing Learning Goals

- Solve Put Together, Total Unknown story problems.

Student-facing Learning Goals

- Let's show what happens in a story problem and solve it.

Lesson Purpose

The purpose of this lesson is for students to solve Put Together, Total Unknown story problems.

In a previous unit, students solved Add To, Result Unknown and Take From, Result Unknown story problems. In Put Together, Total Unknown story problems, there are 2 groups of objects, rather than 1 group of objects with more added or taken away. Because there are 2 groups of objects (such as red apples and green apples), students may distinguish between the 2 groups in a variety of ways, such as:

- drawing pictures of the different groups
- separating the groups
- using 2 different colors
- using letters, words, or numbers as labels

Students may have used some of these representations in the previous unit. While it is not important for students to use any particular method, they should be able to communicate how their representation shows the story (MP6). The purpose of the lesson synthesis is for students to think about how to improve their representation.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 1, Activity 2
- Connecting cubes: Activity 3
- Materials from previous centers: Activity 3
- Two-color counters: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Materials to Copy

- Make or Break Apart Numbers Stage 1 Dot Page (groups of 2): Activity 3
- Make or Break Apart Numbers Stage 1 Number Mat 4 - 9 (groups of 1): Activity 3
- Make or Break Apart Numbers Stage 1 Recording Sheet (groups of 1): Activity 3

Teacher Reflection Question

In Unit 4, students solved Add To, Result Unknown and Take From, Result Unknown story problems. How did that work prepare students for the work in this lesson? How are Put Together, Total Unknown problems different from the story problems students have worked with?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 5, Section B Checkpoint

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

Student-facing Task Statement

Lesson observations

Student Responses

- Accurately retell a story problem in their own words.
- Use objects or drawings to represent a story problem.
- Explain how objects or drawings represent a story problem.

- Use labels, colors, numbers, or other methods to represent the two groups in a story problem.

Begin Lesson

Warm-up

🕒 10 min

Notice and Wonder: Numberless Story Problem

Standards Alignments

Building Towards K.OA.A.1, K.OA.A.2

This warm-up prompts students to make sense of a problem before solving it, by familiarizing themselves with a context and the mathematics that might be involved (MP1). In this warm-up, students notice and wonder about a numberless story problem to make sense of a new problem type: Put Together, Total Unknown. Students will solve the story problem in the next activity.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?

Elena was shopping at the market with her grandfather.

Elena chose some mangoes.

Her grandfather chose some pineapples.

How many pieces of fruit did they choose?

Student Responses

Students may notice:

Launch

- Groups of 2
- Display the story problem.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

- Elena and her grandfather were shopping.
- They were at a market.
- They chose 2 kinds of fruit. They chose mangoes and pineapples.
- We don't know how many pieces of fruit they chose.

Students may wonder:

- How many pineapples did they choose?
- How many mangoes did they choose?
- How many pieces of fruit did they choose?
- Did they choose any other pieces of fruit?
- What are they going to make with the fruit?
- Did they choose more mangoes or more pineapples?

Synthesis

- "In the next activity, we will find out more about the fruit that Elena and her grandfather chose at the market."

Activity 1

 10 min

Fruit at the Market

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

The purpose of this activity is for students to solve a Put Together, Total Unknown story problem. Students were introduced to the context in a numberless story problem in the warm-up. The purpose of the activity synthesis is to highlight that labels are helpful in understanding how written work represents a story problem (MP2).

The story problems throughout this section will often use fruit as a context. Keep a list of the types of fruit that students name in the launch and consider adjusting the contexts in future story problems to incorporate the fruits that students are familiar with.

Access for English Learners

MLR8 Discussion Supports. Pair verbal descriptions with pointing to the images of the mango and pineapple to clarify the meaning.

Advances: Listening, Representing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Elena was shopping at the market with her grandfather.

Elena chose 4 mangoes.

Her grandfather chose 2 pineapples.

How many pieces of fruit did they choose?



Student Responses

6 pieces of fruit.

Sample responses:

- Students use math tools such as connecting cubes or counters to represent the story.
- Students draw a picture.

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- “We just read about Elena and her grandfather choosing fruit. Many families eat different kinds of fruit. What kind of fruit do you eat with your family?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.
- Read and display the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Monitor for students who accurately retell the story. Choose at least one student to share with the class.
- Reread the task statement.
- “Show your thinking using drawings, numbers, words, or objects.”

Activity

- 2 minutes: independent work time
- 2 minutes: partner discussion
- Monitor for students who include labels in their drawings.

Synthesis

- Invite a student who created a drawing with no labels to share.
- Invite a student who created a drawing

with labels to share.

- “What is the same and what is different about how they each showed the story?”
- “Where can you see the pineapples and mangoes in each drawing?”

Advancing Student Thinking

If students retell or represent the mangoes that Elena chose but not the pineapples that her grandfather chose, consider asking:

- “Can you use your objects/drawings to tell me what happened in the story?”
- Reread the story problem and ask “Elena chose 4 mangoes. What else happened in the story?”

Activity 2

🕒 10 min

A Bear with Berries

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

The purpose of this activity is for students to solve a Put Together, Total Unknown story problem. Students are encouraged to use clear and precise language to explain how their representation shows the story problem (MP6).

♿ Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including what drawings, numbers, words, or objects they will use, to determine how many berries the bear ate.

Supports accessibility for: Conceptual Processing, Organization

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

A bear was searching for berries to eat in the forest.

He ate 3 blueberries.

He ate 6 raspberries.

How many berries did the bear eat?



Student Responses

9 berries.

Sample responses:

- Students use math tools such as connecting cubes or counters to represent the story.
- Students draw a picture.

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Read and display the task statement.
- "Tell your partner what happened in the story."
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Monitor for students who accurately retell the story. Choose at least one student to share with the class.
- Reread the task statement
- "Show your thinking using drawings, numbers, words, or objects. Make sure that your partner can see how your work shows what is happening in the story."

Activity

- 2 minutes: independent work time
- 2 minutes: partner discussion

Synthesis

- "Tell your partner how your objects or drawings show what happened in the story."

Advancing Student Thinking

If students take out or draw more or fewer than 9 math tools or symbols, consider asking:

- "Can you use your objects/drawings to tell me what happened in the story?"
- "The bear ate 3 blueberries. Which objects/drawings show the 3 blueberries that the bear ate? Which objects/drawings show the 6 raspberries that the bear ate?"

Activity 3

🕒 25 min

Introduce Make or Break Apart Numbers, Numbers to 9

Standards Alignments

Addressing K.OA.A.1, K.OA.A.3

The purpose of this activity is for students to learn stage 1 of the Make or Break Apart Numbers center. Students roll to get a number from 4–9. They find two groups of dots that can be put together to make that number. Students write an expression to represent the two parts that make the number.

After they participate in the center, students choose from any stage of previously introduced centers.

- What's Behind My Back?
- 5-frames

Students will choose from these centers throughout the section. Keep materials from these centers organized to use each day.

Materials to Gather

Connecting cubes, Materials from previous centers, Two-color counters

Materials to Copy

Make or Break Apart Numbers Stage 1 Dot Page (groups of 2), Make or Break Apart Numbers Stage 1 Number Mat 4 - 9 (groups of 1), Make or Break Apart Numbers Stage 1 Recording Sheet (groups of 1)

Required Preparation

- Gather materials from:
 - What's Behind My Back, Stage 1
 - 5-frames, Stages 1 and 2

Student-facing Task Statement

Launch

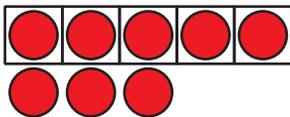
- Groups of 2
- Give each group of students two-color counters, 1 connecting cube, a number

Choose a center.

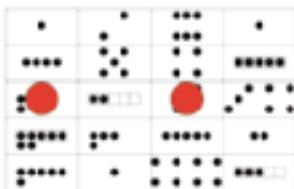
What's Behind My Back?



5-frames



Make or Break Apart Numbers



mat, and a dot page. Give each student a recording sheet.

- "We are going to learn a center called Make or Break Apart Numbers. I'm going to roll a cube onto the number mat to find which number I have to make."
- Demonstrate rolling the connecting cube onto the number 5.
- Display the dot page.
- "We rolled the number 5. My partner and I have to find 2 groups of dots that go together to make 5. Which groups of dots go together to make 5?"
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- "I'm going to put a counter on this group of 3 dots and a counter on this group of 2 dots. 3 dots and 2 dots is 5 dots. What expression should I write on my recording sheet?" ($3 + 2$)
- 30 seconds: quiet think time
- Share responses.
- Demonstrate writing $3 + 2$.
- "Now that my partner and I have written our expression, we can look to see if there are 2 more groups of dots that go together to make 5 dots. If we can't find any more ways to make 5, then we roll and make another number."
- "Work with your partner to find 2 groups of dots to make a number and write an expression."

Activity

- 10 minutes: partner work time
- "Now you can choose another center. You can also continue playing Make or Break Apart Numbers."
- Display the center choices in the student

book.

- Invite students to work at the center of their choice.
- 10 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- Display a dot page with a counter on 3 dots and 3 dots.
- “Diego and Tyler covered these 2 groups of dots to make 6. Are there 2 other groups of dots that Diego and Tyler can cover to make 6?” (4 and 2, 5 and 1)

Lesson Synthesis

🕒 5 min

“Today we read and solved story problems.”

Reread the story problem:

A bear was searching for berries to eat in the forest.

He ate 3 blueberries.

He ate 6 raspberries.

How many berries did the bear eat?

“What can you add to or change about your work to show what is happening in the story?”

Invite students to improve or change their representations.

Lesson 6: Red and Yellow Apples

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2
 Building Towards K.OA.A.1, K.OA.A.2, K.OA.A.3

Teacher-facing Learning Goals

- Make sense of Put Together/Take Apart, Both Addends Unknown story problems.

Student-facing Learning Goals

- Let's show what happens in a story.

Lesson Purpose

The purpose of this lesson is for students to make sense of Put Together/Take Apart, Both Addends Unknown story problems.

In a previous section, students composed and decomposed numbers up to 9. In this lesson, students first act out a Put Together, Total Unknown story problem, which was introduced in the previous lesson. Then students are introduced to a questionless Put Together/Take Apart, Both Addends Unknown story problem. Red and yellow apples are used as a context so that students can easily represent the story problems with two-color counters (MP2). In the next lesson, students will solve a Put Together/Take Apart, Both Addends Unknown story problem.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Warm-up
- Connecting cubes: Activity 2
- Materials from previous centers: Activity 3
- Two-color counters: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Teacher Reflection Question

What connections did students make between the Put Together, Total Unknown story problem and the Put Together/Take Apart, Both Addends Unknown story problem? How did acting out, representing and solving the Put Together, Total Unknown story problem prepare students to make sense of the Put Together/Take Apart, Both Addends Unknown story problem?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 5, Section B Checkpoint

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

Student-facing Task Statement

Lesson observations

Student Responses

- Accurately retell a story problem in their own words.
- Use objects or drawings to represent a story problem.
- Explain how objects or drawings represent a story problem.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Act It Out: All About Apples

Standards Alignments

Building Towards K.OA.A.1, K.OA.A.2

The purpose of this warm-up is to allow students to connect language to mathematical representation, which will be useful when students compare a Put Together, Total Unknown story problem and a Put Together/Take Apart, Both Addends Unknown story problem in a later activity.

Instructional Routines

Act It Out

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Mai was picking apples at the orchard.

Mai picked 5 yellow apples and 2 red apples.



Student Responses

Sample responses:

- We can pretend to pick the apples.
- We can use red and yellow counters to pretend to pick red and yellow apples.

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Display and read the story.
- “What is the story about?”
- 30 seconds: quiet think time
- Share responses.
- Read the story again.
- “How can you act out this story?”
- 30 seconds: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share responses.
- Choose a way to represent the story as a class.
- Read the story together.
- “We just acted out what happened in this story problem. Now it’s your turn to show what happened in the story problem. Show your thinking using drawings, numbers, words, or objects.”
- 3 minutes: independent work time

Synthesis

- “In the next activity we will hear a different story about picking apples.”

Activity 1

🕒 10 min

Two Problems about Apples

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

The purpose of this activity is for students to compare a Put Together, Total Unknown story problem and a Put Together/Take Apart, Both Addends Unknown story problem with a similar context. This is the first time that students have worked with a Put Together/Take Apart, Both Addends Unknown story problem.

🕒 Access for Students with Disabilities

Representation: Access for Perception. Synthesis: Create a visual display to represent each story. For Mai, draw 7 circles and ask, “how many should I color in yellow?” and “how many should I color in red?” (5 yellow and 2 red). For Lin, draw 8 unshaded circles, and ask, “do we know which colors to use for Lin’s apples?” (no, we do not know how many of each color she picked).

Supports accessibility for: Visual-Spatial Processing, Organization

Student-facing Task Statement

1. Mai was picking apples at the orchard.
Mai picked 5 yellow apples and 2 red apples.
2. Lin picked 8 apples at the orchard.
Some of the apples were yellow.
The rest of the apples were red.

Launch

- Groups of 2
- Read both stories.
- “What do you notice? What do you wonder?” (There are 2 stories. They are both about picking apples. There are red apples and yellow apples in both. I wonder how many red apples Lin picked.)

Activity

- Read the first story problem.



- “What do you know about Mai’s apples in this story? What do you not know?” (We know that she picked red and yellow apples. We know that she picked 5 yellow apples and 2 red apples. We do not know how many apples she picked altogether.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Read the second story problem.
- “What do you know about Lin’s apples in this story? What do you not know?” (We know that she picked 8 apples. We know that some of them were red and some of them were yellow. We don’t know how many red ones or how many yellow ones she picked.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.

Synthesis

- “What is the same about these stories?” (They are both about picking apples. They both have red and yellow apples.)
- “What is different about the stories?” (The first story is about Mai and the next story is about Lin. In the first story we knew how many yellow apples and how many red apples. In the second story we know that there are 8 apples altogether.)
- “In the next activity, we will work on showing what happened in the second story.”

Activity 2

🕒 10 min

Yellow Apples and Red Apples

Standards Alignments

Addressing	K.OA.A.1
Building Towards	K.OA.A.2, K.OA.A.3

The purpose of this activity is for students to make sense of a questionless Put Together/Take Apart, Both Addends Unknown story problem. In this activity, students are asked to show what Lin’s apples could have looked like. The focus of this activity is for students to show the two groups of apples, rather than on answering specific questions about how many red apples and how many yellow apples Lin had. While students may notice that there is more than one possible solution to the story problem, that is not highlighted until the next lesson.

When students explain to a partner how they have represented the apples they reason abstractly and quantitatively (MP2).

Access for English Learners

MLR8 Discussion Supports. Use multimodal examples to show the meaning of “some of” and “the rest of.” Use verbal descriptions along with gestures, drawings, or concrete objects to show the groupings.

Advances: Listening, Representing

Materials to Gather

Connecting cubes, Two-color counters

Student-facing Task Statement

Lin picked 8 apples at the orchard.

Some of the apples were yellow.

The rest of the apples were red.

Student Responses

Students show 8 apples, some red and some yellow.

Sample responses:

- Students show 4 red counters and 4 yellow counters.
- Students show 6 red counters and 2 yellow

Launch

- Groups of 2
- Give students access to connecting cubes and two-color counters.
- Read and display the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Monitor for students who accurately retell the story. Choose at least one student to share with the class.
- “Use objects or drawings to show what Lin’s apples could look like.”

counters.

- Students draw a picture with 3 red apples and 5 yellow apples.
- Students draw a picture with 8 circles and label 7 as red and 1 as yellow.

Activity

- 3 minutes: independent work time
- “Share how you showed Lin’s apples with your partner. Tell your partner how your objects or drawings show Lin’s apples.”
- 30 seconds: quiet think time
- 2 minutes: partner discussion
- Monitor for students who use two-color counters to show 8 apples, some red and some yellow. Monitor for students who show different decompositions of 8, such as 5 and 3 and 4 and 4.

Synthesis

- Invite previously selected students to share.
- As each student shares, ask:
 - “How many apples did Lin pick?”
 - “Where do you see the red apples that Lin picked?”
 - “Where do you see the yellow apples that Lin picked?”
- “___ used red and yellow counters to show Lin’s apples. What could I do if I wanted to draw a picture to show Lin’s apples?” (You could draw 4 red apples and 4 yellow apples. You could draw some circles. You could write r for red and y for yellow.)

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice composing,

decomposing, adding, and subtracting numbers.

Students choose from any stage of previously introduced centers.

- What's Behind My Back?
- 5-frames
- Make or Break Apart Numbers

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - What's Behind My Back, Stage 1
 - 5-frames, Stages 1 and 2
 - Make or Break Apart Numbers, Stage 1

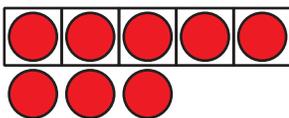
Student-facing Task Statement

Choose a center.

What's Behind My Back?



5-frames



Make or Break Apart Numbers

Launch

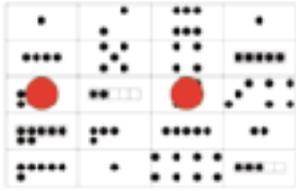
- "Today we are going to choose from centers we have already learned."
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time
- "Choose what you would like to do next."
- 10 minutes: center work time

Synthesis

- "One of the materials we use during centers is connecting cubes. How should



we use connecting cubes during centers?
What's an example of how you saw a
classmate using the connecting cubes to do
math?"

Lesson Synthesis

🕒 5 min

Display the student representations from the synthesis of the second activity.

"What is the same about all of their work?" (They all showed that Lin picked 8 apples. They all show some red apples and some yellow apples.)

Lesson 7: Solve Both Addends Unknown Story Problems

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3
 Building Towards K.OA.A.3

Teacher-facing Learning Goals

- Solve Put Together/Take Apart, Both Addends Unknown story problems.

Student-facing Learning Goals

- Let's solve story problems.

Lesson Purpose

The purpose of this lesson is for students to solve Put Together/Take Apart, Both Addends Unknown story problems.

In the previous lesson, students represented a questionless Put Together/Take Apart, Both Addends Unknown story problem. In this lesson, students notice and discuss that Put Together/Take Apart, Both Addends Unknown story problems have more than 1 solution. In the second activity, students discuss how labels show the solution to the story problem.

In a previous section, students used expressions to represent compositions and decompositions of numbers. Beginning in the second activity and throughout the rest of the section, students write an expression to record the solution or solutions they find for the story problem.

Throughout this section, the teacher records student responses with equations. Equations are read aloud to students as "10 is 5 plus 5." Students will be asked to interpret and work with equations in the next section.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters:

Materials to Copy

- Math Stories Stage 3 Pictures (groups of 8):

Activity 1, Activity 2, Activity 3

- Materials from previous centers: Activity 3

Activity 3

- Math Stories Stage 3 Recording Sheet (groups of 1): Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Teacher Reflection Question

Reflect on who participated in math class today. What assumptions are you making about those who did not participate? How can you leverage each of your students' ideas to support them in being seen and heard in tomorrow's math class?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 5, Section B Checkpoint

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

Student-facing Task Statement

Lesson observations

Student Responses

- Accurately retell a story problem in their own words.
- Use objects or drawings to represent a story problem.
- Explain how objects or drawings represent a story problem.
- Use labels, colors, numbers, or other methods to represent the 2 groups in a story problem.

----- Begin Lesson -----

Warm-up

🕒 10 min

Which One Doesn't Belong: Decompose with Math Tools

Standards Alignments

Addressing K.OA.A.3

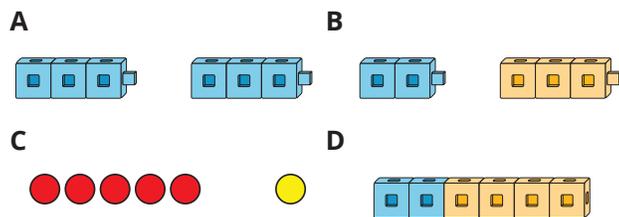
This warm-up prompts students to carefully analyze and compare the features of 4 images. Students consider different representations of decompositions, similar to what they worked with in a previous section. In making comparisons, students have a reason to use language precisely (MP6). The activity also enables the teacher to hear the terminologies students know and how they talk about characteristics of the images.

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?



Student Responses

Sample responses:

A doesn't belong because:

- It is the only one that does not have 2 colors.

B doesn't belong because:

- It is the only one that is not 6.

C doesn't belong because:

- It is the only one that is not connecting cubes.

D doesn't belong because:

- It is the only one in which the 2 groups are

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2-3 minutes: partner discussion
- Share and record responses.

Synthesis

- "Which math tools show different ways to break apart 6? What different ways to break apart 6 do you see?"

not separate.

Activity 1

🕒 10 min

Fruit for Paletas

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2
Building Towards K.OA.A.3

The purpose of this activity is for students to notice that there is more than one way to solve a Put Together/Take Apart, Both Addends Unknown story problem. While there are multiple possible solutions to this story problem, students are only expected to produce one solution in this activity. The goal of the activity synthesis is to investigate different solutions and see that this type of story problem allows for multiple correct solutions.

When students attend to the mathematical features of a situation, adhere to mathematical constraints, make choices, and translate a mathematical answer back into the context, they model with mathematics (MP4).

🕒 Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Give students access to 5-frames so that they can place connecting cubes or two-color counters in them in order to determine how many coconut and lime paletas Jada made.

Supports accessibility for: Conceptual Processing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Jada made 6 paletas with her brother.

They made two flavors, lime and coconut.

How many of the paletas were lime?

Then how many of the paletas were coconut?

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- “Many families and cultures make special desserts. Are there desserts that you make with your family?”



Student Responses

Students represent the story problem using objects or drawings.

Sample responses:

- 5 lime, 1 coconut
- 4 lime, 2 coconut
- 3 lime, 3 coconut
- 2 lime, 4 coconut
- 1 lime, 5 coconut

- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Display the image.
- “Paletas are a type of ice pop popular in Mexico. They are usually made with fruit.”
- Read and display the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- “What are we trying to figure out?” (How many of the paletas had lime and how many had coconut.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- “Show your thinking using drawings, numbers, words, or objects.”

Activity

- 2 minutes: independent work time
- 2 minutes: partner discussion
- Monitor for students who show different decompositions of 6.

Synthesis

- Invite previously identified students to share.
- “What is the same about how ____ and ____ solved the story problem?” (They both showed 6 paletas total. They showed some lime and some coconut.)
- “What is different about how ____ and ____ solved the story problem?” (One showed 3 lime and 3 coconut. The other showed 5 lime and 1 coconut.)
- “Did both ____ and ____ solve the story problem? Why do you think that?” (Yes.

They both showed 6 paletas. They both showed some coconut paletas and some lime paletas.)

- “There is more than 1 answer to the story problem. Just like when we snapped our cube towers, there was more than 1 way that we could snap it into 2 pieces.”
- Record each student’s solution with an equation that begins with the total. For example:
 - Write $6 = 3 + 3$ and say, “There were 6 paletas. 3 of them were coconut paletas and 3 of them were lime paletas. We can write that as 6 is 3 plus 3.”

Advancing Student Thinking

If students take out 6 objects or draw 6 pictures or symbols but are unsure what to do next, consider asking:

- “Can you tell me what happened in the story problem? What are we trying to figure out?”
- “Which objects/drawings show the lime paletas? Which show the coconut paletas?”

Activity 2

🕒 10 min

Pomegranates

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2
 Building Towards K.OA.A.3

The purpose of this activity is for students to solve a Put Together/Take Apart, Both Addends Unknown story problem. In the activity and lesson synthesis, students discuss different ways to show the 2 groups and how showing the 2 groups clearly helps you answer the questions (MP2).

Access for English Learners

MLR8 Discussion Supports. Provide students the opportunity to act out the scenario using connecting cubes or counters. Listen for and clarify any questions about the context.

Advances: Speaking, Representing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Kiran had 7 pomegranates in his bag.

He put some of the pomegranates on the shelf.

He put the rest of the pomegranates in a basket.

How many of the pomegranates were on the shelf?

Then how many of the pomegranates were in the basket?

Expression: _____



Student Responses

Students represent the story problem using objects or drawings.

Sample responses:

- 6 on the shelf, 1 in the basket, $6 + 1$
- 5 on the shelf, 2 in the basket, $5 + 2$
- 4 on the shelf, 3 in the basket, $4 + 3$
- 3 on the shelf, 4 in the basket, $3 + 4$

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Read and display the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Monitor for students who accurately retell the story. Choose at least one student to share with the class.
- Reread the task statement.
- “Show your thinking using drawings, numbers, words, or objects.”

Activity

- 2 minutes: independent work time
- 2 minutes: partner discussion
- “Write an expression to show how many of the pomegranates were on the shelf and how many were in the basket.”
- 1 minute: independent work time
- Monitor for a student who creates a drawing that clearly shows which pomegranates are on the shelf and which are in the basket.

- 2 on the shelf, 5 in the basket, $2 + 5$
- 1 on the shelf, 6 in the basket, $1 + 6$

Synthesis

- Draw 7 circles with no labels.
- “Elena drew 7 circles to show Kiran’s pomegranates.”
- Invite a student who created a drawing with labels to share.
- “Which drawing helps you see what happens in the story? Why?” (In the second drawing we can just see which ones are on the shelf and which ones are in the basket, so it helps us to see the story. The circles with sh are the pomegranates on the shelf.)
- Record each student’s solution with an equation that begins with the total. For example:
 - Write $7 = 3 + 4$ and say, “There were 7 pomegranates. 3 of them were on the shelf and 4 of them were in the basket. We can write that as 7 is 3 plus 4.”

Advancing Student Thinking

If students take out or draw 7 objects or symbols, but it is unclear which are representing pomegranates on the shelf and which are representing pomegranates in the basket, consider asking:

- “What are we trying to figure out?”
- “Can you use your objects/drawings to tell me what happened in the story?”

Activity 3

🕒 25 min

Introduce Math Stories, How Many of Each?

Standards Alignments

Addressing K.OA.A.2, K.OA.A.3

The purpose of this activity is to introduce students to stage 3 of the Math Stories center. Students tell and represent Put Together/Take Apart, Both Addend Unknown story problems based on a picture.

After they participate in the center, students choose from any stage of previously introduced centers.

- What's Behind My Back?
- 5-frames
- Make or Break Apart Numbers

Materials to Gather

Connecting cubes or two-color counters,
Materials from previous centers

Materials to Copy

Math Stories Stage 3 Pictures (groups of 8),
Math Stories Stage 3 Recording Sheet (groups of 1)

Required Preparation

- Gather materials from:
 - What's Behind My Back, Stage 1
 - 5-frames, Stages 1 and 2
 - Make or Break Apart Numbers, Stage 1

Student-facing Task Statement



Choose a center.

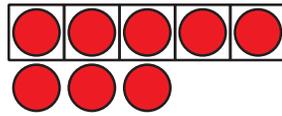
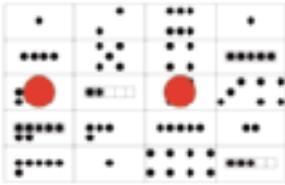
What's Behind My Back? 5-frames

Launch

- Groups of 2
- Give each group of students a set of pictures and access to connecting cubes or two-color counters. Give each student a recording sheet.
- "We are going to learn a new way to do the Math Stories center. It is called Math Stories, How Many of Each?"
- Display the student book.
- "Priya picked all the apples from the apple tree. One partner will tell a story about which apples Priya put in the green basket and which apples she put in the red basket. Think of a story you can tell your partner."



Make or Break Apart
Numbers



Math Stories



- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- “Now I need to use objects or drawings to show what happened in my partner’s story. How can I show what happened in my partner’s story?”
- 30 seconds: quiet think time
- Share responses.
- Demonstrate representing the story with objects or drawings based on student suggestions.
- “Once I finish using objects or drawings to show what happened in my partner’s story, I need to tell my partner a different story about the apples and the baskets.”
- Share a Put Together/Take Apart, Both Addends Unknown story about the apples with a different decomposition, such as: Priya collected 6 apples from the tree. She put 4 of the apples in the green basket and 2 of the apples in the red basket.
- “Take turns working with your partner. One partner tells a story about the picture and the other partner shows what happens in the story using objects or drawings. Then think of a different story about the picture.”

Activity

- 10 minutes: partner work time
- “Now you can choose another center. You can also continue playing Math Stories.”
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 10 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- Invite students to share 2 different Put Together/Take Apart, Both Addends Unknown stories about the same picture.
- “Are there any other stories that we can tell about this picture?”

Lesson Synthesis

🕒 5 min

Draw 7 circles.

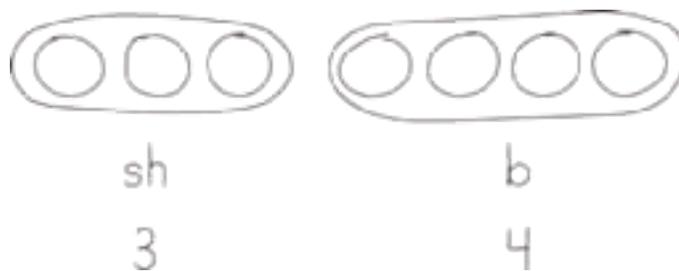


Reread the task statement from the second activity.

“Priya wants to show that 5 of the pomegranates are on the shelf and 2 of the pomegranates are in the basket. What can she change or add to the drawing to show this?” (She can write an sh for shelf and a b for basket. She can write the numbers 5 and 2. She can draw a line or circle to show which are on the shelf and which are in the basket.)

Demonstrate student suggestions or invite students to demonstrate their suggestions.

Draw 7 circles with numbers and labels as pictured:



“Tyler drew this picture. Does Tyler’s picture show the story?” (Yes. He showed 7 pomegranates with 3 on the shelf and 4 in the basket.)

“We can use labels, colors, and numbers to help us show what is happening in the story.”

Lesson 8: More Than One Way

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3
 Building Towards K.OA.A.5

Teacher-facing Learning Goals

- Find more than one solution to a Put Together/Take Apart, Both Addends Unknown story problem.

Student-facing Learning Goals

- Let's find more than one way to solve a problem.

Lesson Purpose

The purpose of this lesson is for students to find more than one solution to a Put Together/Take Apart, Both Addends Unknown story problem.

In previous lessons, students solved Put Together/Take Apart, Both Addends Unknown story problems and noticed that there is more than 1 solution. This is the first lesson in which students are asked to find more than one solution to a Put Together/Take Apart, Both Addends Unknown story problem.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
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Teacher Reflection Question

In the previous section, students composed and decomposed numbers in multiple ways. How

Activity 1	10 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	5 min
Cool-down	5 min

did the work of decomposing numbers in multiple ways prepare students to find more than one solution to a Put Together/Take Apart, Both Addends Unknown story problem?

Cool-down (to be completed at the end of the lesson)

🕒 5 min

Both Addends Unknown

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

Student-facing Task Statement

Kiran bought 6 plums at the store.

Some of the plums were red.

The rest of the plums were purple.

How many of the plums were red?

Then how many of the plums were purple?

Show your thinking using objects, drawings, numbers, or words.

Student Responses

Sample responses:

- 5 red plums, 1 purple plum
- 3 red plums, 3 purple plums

----- Begin Lesson -----

Warm-up

 10 min

Number Talk: Expressions

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

Building Towards K.OA.A.5

The purpose of this Number Talk is to elicit strategies and understandings students have for adding and subtracting 1. These understandings help students develop fluency with the count sequence and adding and subtracting within 5. When students use their knowledge of the count sequence when they add or subtract 1, they are looking for and making use of structure (MP7).

Instructional Routines

Number Talk

Student-facing Task Statement

Find the value of each expression.

- $3 + 1$
- $1 + 3$
- $4 - 1$
- $4 + 1$

Student Responses

- 4. 4 is 1 more than 3. 4 comes after 3 when we count.
- 4. I held up 1 finger and 3 more fingers. I counted 1, 2, 3, 4.
- 3. 3 is 1 less than 4.
- 5. 4 and 1 more is 5.

Launch

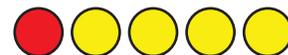
- Display one expression.
- “Give me a signal when you have an answer and can explain how you got it.”
- 1 minute: quiet think time

Activity

- Record answers and strategy.
- Keep problems and work displayed.
- Repeat with each expression.

Synthesis

- Display or draw 1 red counter and 4 yellow counters:



- Display the expressions.
- “Which expression goes with these counters? Why do you think that?” ($4 + 1$ because there are 4 yellow and 1 red.)

Activity 1

 10 min

Citrus Juice

 PLC Activity

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

The purpose of this activity is for students to connect representations to story problems. Students look at two drawings and determine whether they both show solutions to a Put Together/Take Apart, Both Addends Unknown story problem. In the activity synthesis, students work with their partner to find another possible solution to the given story problem, which will be useful when they find more than one way to solve a Put Together/Take Apart, Both Addends Unknown story problem in the next activity.

When students describe how the diagrams represent the story problem, they reason abstractly and quantitatively (MP2).

Access for English Learners

MLR8 Discussion Supports. Invite students to take turns explaining their drawings to their partner, including reading the numbers to show how many satsumas and how many grapefruits were used. Listen for and clarify any questions about the numbers or drawings.

Advances: Listening, Speaking

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Han squeezed 9 pieces of fruit to make juice.

Some of the fruits were satsumas.

The rest of the fruits were grapefruits.

How many of the fruits were satsumas?

Then how many of the fruits were grapefruits?

Launch

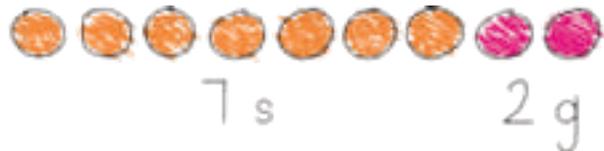
- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Read the task statement.
- Display the images.
- “Clare and Diego both drew a picture to show what happened in the story. What do you notice? What do you wonder?” (They both drew 9 circles. One used color and



Clare:



Diego:



Han squeezed 9 pieces of fruit to make juice.

Some of the fruits were satsumas.

The rest of the fruits were grapefruits.

How many of the fruits were satsumas?

Then how many of the fruits were grapefruits?

Show your thinking using objects, drawings, numbers, or words.

Expression: _____

Student Responses

Sample responses:

- Clare and Diego's drawings both match the story because they both show some satsumas and some grapefruits, with 9 pieces of fruit altogether.
- Clare's drawing matches the story because there are 9 pieces of fruit—some satsumas and some grapefruits.
- Diego's drawing matches the story because

one didn't. One has numbers and letters and one just has numbers. I wonder why Clare didn't use different colors. I wonder why one shows 3 and 6 and one shows 7 and 2.)

- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.

Activity

- "Which drawing shows the story?"
- 1 minute: quiet think time
- 2 minutes: partner discussion
- Share responses.

Synthesis

- "There is more than 1 way to solve the story problem."
- "Which drawing makes it easier to tell how many satsumas and how many grapefruits there are?" (It is easier to see in Diego's drawing because he wrote numbers.)
- "Diego wrote numbers to show how many satsumas and how many grapefruits Han squeezed."
- "Work with your partner to show another solution for the story problem. Be sure to include numbers to show how many satsumas and how many grapefruits."
- Reread the task statement.
- "Show your thinking using drawings, numbers, words, or objects."
- 3 minutes: partner work time
- "Write an expression to show how many satsumas and how many grapefruits there are."
- 1 minute: independent work time

he showed 7 satsumas and 2 grapefruits, which is 9 pieces of fruit total.

Advancing Student Thinking

If students identify either Clare or Diego's drawings as showing the story but not both, consider rereading the story problem and asking:

- "What do we know about the fruit that Han squeezed? What are we trying to figure out?"
- "What is the same and what is different about Clare and Diego's drawings?"

Activity 2

🕒 15 min

Dates to Stuff

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

The purpose of this activity is for students to solve a Put Together/Take Apart, Both Addends Unknown story problem about dates stuffed with cheese or almonds in more than one way. In the activity synthesis, students share their solutions. As students share, record their drawings and solutions systematically, as shown:

- 1 cheese, 7 almond
- 2 cheese, 6 almond
- 3 cheese, 5 almond
- 4 cheese, 4 almond
- 5 cheese, 3 almond
- 6 cheese, 2 almond
- 7 cheese, 1 almond

Only record solutions that students find for the problem. Leave an empty space if a combination isn't shared.

In the lesson synthesis, students discuss whether a solution of 3 dates stuffed with cheese and 5 dates stuffed with almonds is the same solution as 5 dates stuffed with cheese and 3 dates

stuffed with almonds. The purpose of the question is for students to think about and discuss what decompositions of numbers mean in context (MP2, MP6). There is no correct answer to the question. Some students may determine that both solutions are the same because they both showed 5 and 3 while other students may determine that the solutions are different because there are different numbers of dates stuffed with cheese and dates stuffed with almonds (MP3).

Access for Students with Disabilities

Representation: Internalize Comprehension. Synthesis: Reiterate the fact that in this problem there is more than one answer. Make a connection between the solutions that were found and that they all add up to the same total number of dates.

Supports accessibility for: Conceptual Processing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Andre and his older brother have 8 dates.

They stuff some of the dates with cheese.

They stuff the rest of the dates with almonds.

How many of the dates did they stuff with cheese?

Then how many of the dates did they stuff with almonds?

Expression: _____



Student Responses

Students represent the story problem using objects or drawings.

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Read and display the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- “What are we trying to figure out?” (How many of the dates were stuffed with cheese and how many of the dates were stuffed with almonds?)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- “Show your thinking using drawings, numbers, words, or objects.”

Activity

- 2 minutes: quiet work time
- 2 minutes: partner discussion

Sample responses:

- 7 dates stuffed with cheese, 1 date stuffed with almonds, $7 + 1$
- 6 dates stuffed with cheese, 2 dates stuffed with almonds, $6 + 2$
- 5 dates stuffed with cheese, 3 dates stuffed with almonds, $5 + 3$
- 4 dates stuffed with cheese, 4 dates stuffed with almonds, $4 + 4$
- 3 dates stuffed with cheese, 5 dates stuffed with almonds, $3 + 5$
- 2 dates stuffed with cheese, 6 dates stuffed with almonds, $2 + 6$
- 1 date stuffed with cheese, 7 dates stuffed with almonds, $1 + 7$

- “Write an expression to show how many of the dates were stuffed with cheese and how many were stuffed with almonds.”
- 1 minute: independent work time
- “As you walk around, look to see if you can find other ways to solve the story problem.”
- 5 minutes: gallery walk

Synthesis

- Invite students to share their solution or solutions they found during the gallery walk. Record student solutions as explained in the activity narrative.
- “What do you notice? What do you wonder?” (2 and 6 is there but not 6 and 2. When it’s 4 and 4, there are the same number of cheese dates and almond dates. The first numbers are getting bigger and the second numbers are getting smaller.)
- “Are there any other ways that we can solve the problem? What makes you think that?”
- Record each student solution with an equation.

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice composing, decomposing, adding, and subtracting numbers.

Students choose from any stage of previously introduced centers.

- What’s Behind My Back?
- 5-frames

- Make or Break Apart Numbers
- Math Stories

Materials to Gather

Materials from previous centers

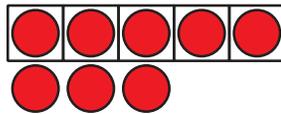
Required Preparation

- Gather materials from from:
 - What's Behind My Back, Stage 1
 - 5-frames, Stages 1 and 2
 - Make or Break Apart Numbers, Stage 1
 - Math Stories, Stages 1-3

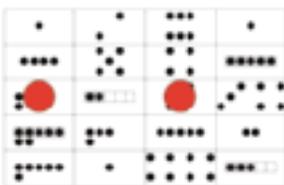
Student-facing Task Statement

Choose a center.

What's Behind My Back? 5-frames



Make or Break Apart Numbers



Math Stories



Launch

- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do.”

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Synthesis

- “When we work in centers, it is fun to share our ideas but we also need to listen to our partner’s ideas. Which did you like better: telling your own story or listening to your partner’s story?”
- “What can you do to make sure that you are a good listener when playing in centers?”

Lesson Synthesis

🕒 5 min

Read the task statement.

Andre and his older brother have 8 dates.

They stuff some of the dates with cheese.

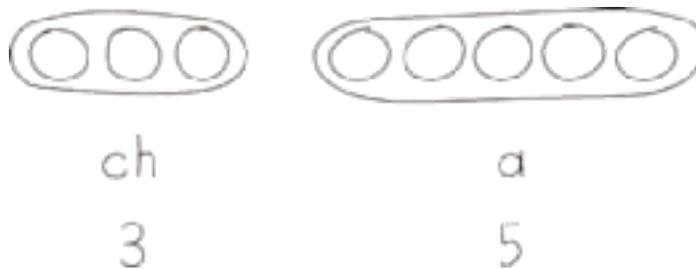
They stuff the rest of the dates with almonds.

How many of the dates did they stuff with cheese?

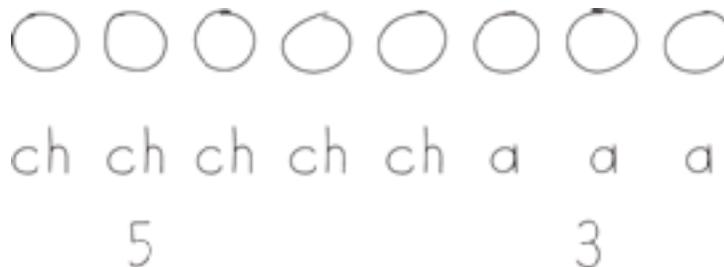
Then how many of the dates did they stuff with almonds?

Draw 2 representations with 3 and 5 and 5 and 3, with labels and numbers, as pictured:

Diego:



Priya:



“Diego and Priya drew these pictures to show what happened in the story. Priya says that they found the same answer to the story problem. What do you think?” (They did find the same answer because they both showed 5 and 3. They did not find the same answer because one showed more dates with cheese and one showed more dates with almonds.)

Write an equation for both Diego and Priya’s solutions. For example:

- Write $8 = 3 + 5$.
- “Andre and his brother have 8 dates. They stuff 3 of them with cheese and 5 of them with almonds. We can write that as 8 is 3 plus 5.”

----- Complete Cool-Down -----

Response to Student Thinking

Students take out 6 objects or draw 6 symbols but it is unclear which represent the red plums and which represent the purple plums.

Next Day Support

- Before the warm-up, select a student's cool-down from the previous lesson (name anonymous). Ask students to identify what the student did well and what the student needs to do to improve the cool-down.

Lesson 9: All of the Story Problems

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2, K.OA.A.1, K.OA.A.2, K.OA.A.3

Teacher-facing Learning Goals

- Solve addition and subtraction story problems.

Student-facing Learning Goals

- Let's solve story problems.

Lesson Purpose

The purpose of this lesson is for students to solve addition and subtraction story problems.

In a previous unit, students solved Add To, Result Unknown and Take From, Result Unknown story problems. In previous lessons, students solved Put Together, Total Unknown and Put Together/Take Apart, Both Addends Unknown story problems. In this lesson, students solve familiar types of story problems. Because the types of story problems are mixed, students need to make sense of what the story is asking them to do (MP1). Then, students create their own story problem.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR7 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

Unlike talking, listening is a difficult thing to observe. At what points in the lesson did you

Activity 1	15 min	observe students listening to one another's ideas today in class? What indicators do you have that they were listening?
Activity 2	15 min	
Activity 3	15 min	
Lesson Synthesis	5 min	

Cool-down (to be completed at the end of the lesson)

⌚ 0 min

Unit 5, Section B Checkpoint

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

Student-facing Task Statement

Lesson observations

Student Responses

- Accurately retell a story problem in their own words.
- Use objects or drawings to represent a story problem.
- Explain how objects or drawings represent a story problem.
- Use labels, colors, numbers, or other methods to represent the 2 groups in a story problem.

----- Begin Lesson -----

Warm-up

⌚ 10 min

Choral Count: Count to 70 and Count On

Standards Alignments

Addressing K.CC.A.1, K.CC.A.2

The purpose of this warm-up is for students to extend the verbal count sequence to 70 and to count on

from a given number. As students count, point to the numbers posted so that students can follow along.

Instructional Routines

Choral Count

Student Responses

- Students count to 70.
- Students count on from 7 to 30.

Launch

- “Let’s count to 70.”
- Count to 70 1–2 times as a class.

Activity

- “Now, start at the number 7 and count to 30.”
- Count on from 7 to 30.
- Repeat 3–4 times starting with other numbers within 10.

Synthesis

- “When I say a number, tell your partner what number comes next when we count.”
- “What numbers come after 11 when we count?”
- 30 seconds: partner discussion
- Repeat 3–4 times with numbers 1–20.

Activity 1

🕒 15 min

All the Story Problems

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

The purpose of this activity is for students to solve a Take From, Result Unknown and a Put

Together/Take Apart, Both Addends Unknown story problem. In the activity synthesis, students match representations to story problems (MP2).

Access for English Learners

MLR7 Compare and Connect. Synthesis: To amplify student language and illustrate connections, follow along and point to the relevant parts of the displays as students describe why each drawing goes with a corresponding story problem.

Advances: Representing, Conversing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

1. Mai grew 7 tomatoes in her garden.

She picked 5 of the tomatoes to make salsa.

How many tomatoes are still in the garden?

Expression: _____



2. There are 9 tomatoes in Mai's garden.

Some of the tomatoes are yellow.

The rest of the tomatoes are red.

How many of the tomatoes are yellow?

Then how many of the tomatoes are red?

Expression: _____

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- Read the first task statement.
- "Tell your partner what happened in the story."
- 30 seconds: quiet think time
- 1 minute: partner discussion
- "What are we trying to figure out?" (How many tomatoes are still in the garden?)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- "Show your thinking using drawings, numbers, words, or objects."

Activity

- 2 minutes: independent work time
- 2 minutes: partner discussion
- "Write an expression to show what happened to the tomatoes in the story."
- 1 minute: independent work time
- Repeat the steps with the second story problem.

Student Responses

1. 2 tomatoes. Sample response: Students represent the story problem using objects or drawings.
2. Students represent the story problem using objects or drawings.
Sample responses:
 - 1 red tomato and 8 yellow tomatoes
 - 5 red tomatoes and 4 yellow tomatoes

- Identify examples of student work for each problem to share in the activity and lesson syntheses.

Synthesis

- Invite previously selected students to display their work side-by-side for all to see (one for each problem).
- Reread each story problem.
- “Which drawing goes with each story problem?”

Activity 2

🕒 15 min

Make and Match Story Problems

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2

The purpose of this activity is for students to create an addition or subtraction story problem with the same context as the story problems from the previous activity. It is likely that students will write Add To, Result Unknown and Take From, Result Unknown story problems. If possible, share a variety of problem types in the activity synthesis.

🕒 Access for Students with Disabilities

Representation: Develop Language and Symbols. Invite students to restate their partner’s story problem before they begin to solve. Original speakers can agree or clarify the story for their partner.

Supports accessibility for: Memory; Organization

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Record your story problem.

Solve the story problem your partner told you.

Show your thinking using objects, drawings, numbers, or words.

Expression: _____

Student Responses

Sample responses:

- Mai planted 1 tomato seed in the garden. Then she planted 3 more tomato seeds. How many tomato seeds did she plant in the garden?
- There were 6 tomatoes in the garden. A rabbit came and ate 2 of the tomatoes. How many tomatoes are still in the garden?
- There are 5 big tomatoes and 4 small tomatoes in the garden. How many tomatoes are in the garden?

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.
- “In the last activity we heard two different story problems about tomatoes in a garden. What happened in the story problems?”
- 30 seconds: quiet think time
- Share responses.
- “You are going to think of a different story problem about fruits or vegetables in a garden. Remember that your story problem should have a question at the end. You can write words or draw pictures to help you remember the story problem that you create.”
- 3 minutes: independent work time

Activity

- “Tell your partner your story problem.”
- 1 minute: partner discussion
- “Solve the story problem your partner told you. Show your thinking using objects, drawings, numbers, or words.”
- 3 minutes: partner work time
- “Write an expression to show the story problem you solved.”
- 1 minute: independent work time

Synthesis

- Invite students to share their story problems. Represent each story problem with an equation.

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice composing, decomposing, adding, and subtracting numbers.

Students choose from any stage of previously introduced centers.

- What's Behind My Back?
- 5-frames
- Make or Break Apart Numbers
- Math Stories

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - What's Behind My Back, Stage 1
 - 5-frames, Stages 1 and 2
 - Make or Break Apart Numbers, Stage 1
 - Math Stories, Stages 1–3

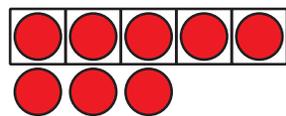
Student-facing Task Statement

Choose a center.

What's Behind My Back? 5-frames



Make or Break Apart



Math Stories

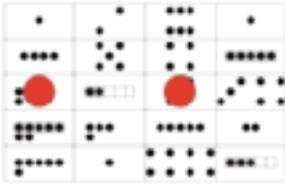
Launch

- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do.”

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time

Numbers



Synthesis

- “What was your favorite center to play? Why was it your favorite?”

Lesson Synthesis

⌚ 5 min

“Today we solved many different story problems about tomatoes in a garden.”

Read the story problems from the first activity and display examples of student work for each story problem.

1. Mai grew 7 tomatoes in her garden.
She picked 5 of the tomatoes to make salsa.
How many tomatoes are still in the garden?
2. There are 9 tomatoes in Mai’s garden.
Some of the tomatoes are yellow.
The rest of the tomatoes are red.
How many of the tomatoes are yellow?
Then how many of the tomatoes are red?

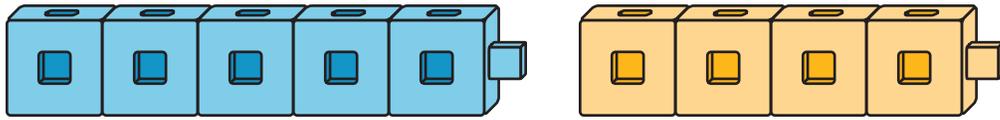
“Why did we all get the same answer to the first story problem? Why did we get different answers for the second story problem?” (In the first story problem, we know she had 7 tomatoes and picked 5 of them, so the answer is 2. In the second story problem, there are different answers because some of the tomatoes are red and some are green.)

Student Section Summary

In this section, we solved story problems with more than one solution.

Han squeezed 9 pieces of fruit to make juice.
Some of the fruits were satsumas.
The rest of the fruits were grapefruits.
How many of the fruits were satsumas?
Then how many of the fruits were grapefruits?

We used objects and drawings to solve story problems.



s

g



7 s

2 g

Section C: Make and Break Apart 10

Lesson 10: Introduce the 10-frame

Standards Alignments

Addressing K.CC.B, K.CC.B.5, K.OA.A.4

Teacher-facing Learning Goals

- Recognize a 10-frame as being composed of two 5-frames.

Student-facing Learning Goals

- Let's make and use 10-frames.

Lesson Purpose

The purpose of this lesson is for students to understand the 10-frame as 2 combined 5-frames and to relate the 10-frame to fingers on two hands.

In previous lessons and units, students represented numbers 1–10 on 5-frames. The structure of the 5-frame encouraged students to see numbers 6–9 in relation to 5. In this lesson, students create a 10-frame and begin to see numbers 1–9 in relation to 10. This lesson also connects the 10-frame with fingers on 2 hands. With repeated experience, students may be able to recognize quantities on a 10-frame without counting, or by counting on from 5 (MP7, MP8).

The 10-frame will be an important tool in upcoming lessons as students compose and decompose 10 in multiple ways and find the number that makes 10 when added to a given number.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Glue: Activity 1

Materials to Copy

- 5-Frames to Cut Out (groups of 1): Activity 1

- Materials from previous centers: Activity 3
- Scissors: Activity 1
- Two-color counters: Activity 2
- Numbers on Fingers and 10-frames (groups of 1): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

In the next several lessons, students will find different ways to compose and decompose 10. The structure to the 10-frame can help students organize and understand these compositions and decompositions. How does organizing the counters on the 10-frame from left to right, top to bottom support this work?

Cool-down (to be completed at the end of the lesson)

 0 min

Unit 5, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.4

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize that a full 10-frame contains 10 counters and that 2 hands have 10 fingers.

----- **Begin Lesson** -----

Warm-up

 10 min

Notice and Wonder: Fingers and 5-frames

Standards Alignments

Addressing K.CC.B

The purpose of this warm-up is to elicit the idea that fingers and 5-frames both show 10 in 2 groups of 5, which will be useful when students use 5-frames to create a 10-frame and represent quantities on 10-frames in later activities.

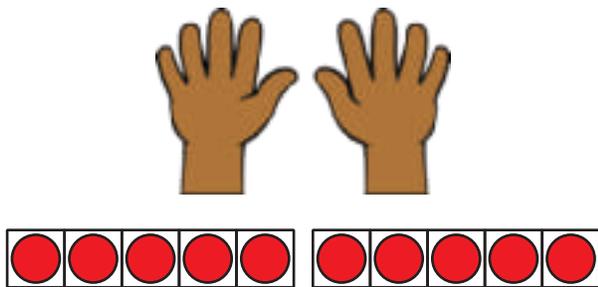
Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?



Student Responses

Students may notice:

- There are 10 fingers.
- There are 10 red circles or counters.
- There are 5 fingers on each hand.
- There are 5 red circles or counters in each 5-frame.

Students may wonder:

- What do the fingers represent?
- What do the counters represent?
- Why are there the same number of fingers and counters?

Launch

- Groups of 2
- Display the image.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “How are the fingers and the counters on 5-frames the same?” (Each hand has 5 fingers. Each 5-frame has 5 counters. There are 10 fingers and 10 counters.)

Activity 1

🕒 15 min

Introduce 10-frames

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to represent quantities between 5 and 10 using 5-frames. Students cut out and put together 5-frames to create a representation of a given number. The images in the student responses look like 10-frames but students may put the 5-frames together in creative ways or take parts of more than two 5-frames. Students may choose to use one 5-frame and draw additional circles to form the number. In the activity synthesis, students see and discuss a 10-frame for the first time. If needed, the 5-frames can be cut out for students before the activity.

Materials to Gather

Glue, Scissors

Materials to Copy

5-Frames to Cut Out (groups of 1)

Student-facing Task Statement

Cut out and glue the 5-frames to make each number.

1. 
2. 

Launch

- Groups of 2
- Give each student a copy of the 5-frames to cut out, glue, and scissors.
- “Make each number. You can cut out the 5-frames to help you make each number.”

Activity

- 8 minutes: partner work time
- Monitor for students who glue two 5-frames, one right above the other.

Synthesis

- Invite previously identified students to share their 5-frames for 9.
- “Today we are going to start using a new tool called a 10-frame. It holds 10 counters



4.

Student Responses

1.

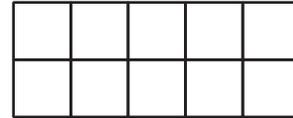
2.

3.

4.

and helps us organize and show numbers. A 10-frame is two 5-frames put together."

- Display a 10-frame or an image, such as:



Activity 2

🕒 10 min

Numbers on Fingers and 10-frames

Standards Alignments

Addressing K.CC.B

The purpose of this activity is for students to gain familiarity with the 10-frame by showing different numbers on it. While students may arrange the counters on the 10-frame in many different ways, the structure of the fingers, with 5 on one hand and some more on another hand, encourages students to think about the 10-frame as 2 groups of 5.

The purpose of the activity synthesis is to highlight the convention of filling out the 10-frame from top to bottom and left to right. This allows students to see numbers 6–10 in relation to 5 and also makes it easy to determine how many squares are empty. While students may organize their counters differently, representations students see will be organized this way to emphasize the structure of the tool. In addition, moving from left to right and from top to bottom aligns with and reinforces the way children learn to read.

Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the question, “How many fingers are held up?” for each picture. This gives both students an opportunity to produce language.

Advances: Conversing

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Make connections between the 5-frame representation that can be seen in the 10-frame that is being used. For example “Do you see a 5-frame in the 10-frame we are using here?” Reiterate the fact that when we use the 10-frame we will fill the top row first and then move from left to right. If time allows, show a non-example of what a 10-frame could look like.

Supports accessibility for: Visual-Spatial Processing, Conceptual Understanding

Materials to Gather

Two-color counters

Student Responses

1. 6 counters
2. 3 counters
3. 10 counters
4. 7 counters
5. 8 counters
6. 5 counters

Materials to Copy

Numbers on Fingers and 10-frames (groups of 1)

Launch

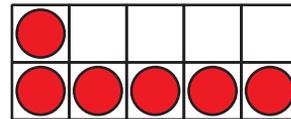
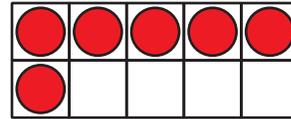
- Groups of 2
- Give each student a copy of the Instructional master and two-color counters.
- “Figure out how many fingers are held up in each picture. Then use your counters to show that number on the 10-frame.”

Activity

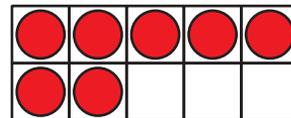
- 6 minutes: partner work time

Synthesis

- Display 10-frames filled as shown:



- “What is the same about these 10-frames? What is different?” (They both show 6 counters. They both have one full row and one counter in the other row. The top one has a full top row and the bottom one has a full bottom row.)
- “In the images that we’ll use in class, we will fill the top row first, from left to right, and then go to the bottom row and fill it from left to right.”
- Display 10-frame filled as shown:



- “This is how we’ll show 7.”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with counting, adding, composing, and decomposing numbers.

Students choose from any stage of previously introduced centers.

- Shake and Spill
- Counting Collections
- Roll and Add

Students will choose from these centers throughout the section. Keep materials from these centers organized to use each day.

Materials to Gather

Materials from previous centers

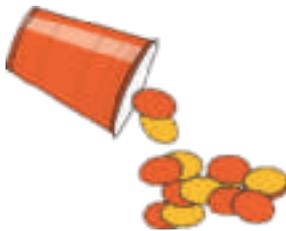
Required Preparation

- Gather materials from:
 - Shake and Spill, Stages 1–3
 - Counting Collections, Stage 1
 - Roll and Add, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Shake and Spill



Counting Collections



Roll and Add

Launch

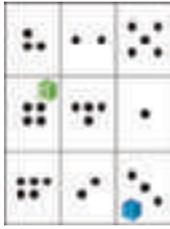
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- “Choose what you would like to do next.”
- 8 minutes: center work time

Synthesis

- “When you were working with your partner



today, how did you decide who goes first?"

Lesson Synthesis

🕒 5 min

"Today we used a new tool called a 10-frame to organize and show numbers."

Display a 10-frame with 6 red counters.

"Tell your partner what you know about this 10-frame." (There are 10 squares on the 10-frame. There are 5 squares on the top and 5 squares on the bottom. There are 6 counters. 4 of the squares are empty.)

"Use your fingers to show how many counters are on the 10-frame."

Lesson 11: Equations that Show 10

Standards Alignments

Addressing K.OA.A.1, K.OA.A.4
Building Towards K.OA.A.2, K.OA.A.3

Teacher-facing Learning Goals

- Match equations to compositions and decompositions of 10

Student-facing Learning Goals

- Let's match equations to 10-frames and fingers.

Lesson Purpose

The purpose of this lesson is for students to connect equations with compositions and decompositions of 10 on 10-frames and fingers.

In previous lessons, students saw equations as one way to represent the answer to a story problem. In this lesson, students make sense of equations in relation to 10-frames and fingers. Students work with many different compositions and decompositions of 10, which will be useful in future lessons when students find the number that makes 10 when added to a given number.

When students match different representations of addition (equations, 10-frames, and fingers) they reason abstractly and quantitatively (MP2).

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Crayons: Activity 2
- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Teacher Reflection Question

What makes someone good at math? In what ways are you making assumptions about which of your students are good at math?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 5, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.4

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize that a full 10-frame contains 10 counters and that 2 hands have 10 fingers.
- Relate equations to compositions and decompositions of 10.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Notice and Wonder: Expressions for 10

Standards Alignments

Addressing K.OA.A.1
 Building Towards K.OA.A.3

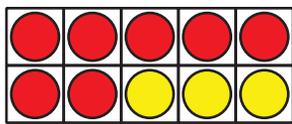
The purpose of this warm-up is to elicit the idea that expressions and equations can be used to represent different compositions and decompositions of 10, which will be useful when students match compositions and decompositions of 10 to equations in a later activity. While students may notice and wonder many things about these images and expressions, the fact that each image and expression represents a total of 10 is the important discussion point. Students have seen equations in previous lessons, but the synthesis is the first time that students are introduced to the term **equation**.

Instructional Routines

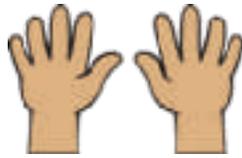
Notice and Wonder

Student-facing Task Statement

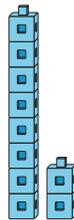
What do you notice?
What do you wonder?



$$7 + 3$$



$$5 + 5$$



$$8 + 2$$

Student Responses

Students may notice:

- There are pictures and expressions.
- They are all 10.
- Each expression has different numbers.

Students may wonder:

- Are there other ways to make 10 with red and yellow counters?
- What other objects or pictures can you use to show 10?

Launch

- Groups of 2
- Display the image.
- “What do you notice? What do you wonder?”
- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “What is the same about each expression?” (They are all 10.)
- Write $10 = 7 + 3$.
- “There are 10 counters, 7 red counters and 3 yellow counters. We can write that as 10 is 7 plus 3. When we write $10 = 7 + 3$, it is called an **equation**.”
- Repeat the steps with the next 2 images.

Activity 1

 10 min

Match Equations and 10-frames

Standards Alignments

Addressing K.OA.A.1

Building Towards K.OA.A.3

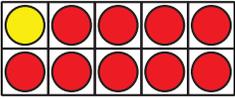
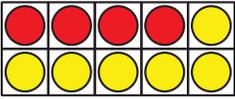
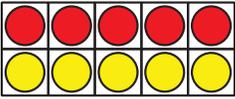
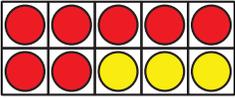
The purpose of this activity is for students to match equations to compositions and decompositions of 10 on 10-frames.

Access for English Learners

MLR8 Discussion Supports. Students should take turns matching each 10-frame to the equation and explaining their reasoning to their partner. Display and read the following sentence frames: "I noticed _____, so I matched" Encourage students to challenge each other when they disagree.

Advances: Listening; Speaking

Student-facing Task Statement

1. 
 $10 = 7 + 3$
 $10 = 8 + 2$
 $10 = 1 + 9$
2. 
 $10 = 4 + 6$
 $10 = 5 + 5$
3. 
4. 

Launch

- Groups of 2
- "Draw a line from each 10-frame to the equation it matches."

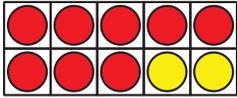
Activity

- 2 minutes: independent work time
- 3 minutes: partner work time

Synthesis

- Invite students to share which equation they matched to the first three 10-frames.
- As students share, ask:
 - "How many counters are on this 10-frame?" (10)
 - "What are the 2 parts that you see?" (5 yellow and 5 red)

5.



Student Responses

1. $10 = 1 + 9$
2. $10 = 4 + 6$
3. $10 = 5 + 5$
4. $10 = 7 + 3$
5. $10 = 8 + 2$

- “There are 10 counters, 5 yellow counters and 5 red counters. 10 is 5 plus 5.”
- Invite students to chorally repeat these equations in unison 1–2 times.

Advancing Student Thinking

If students match the 10-frame with 8 red counters and 2 yellow counters to an equation other than $10 = 8 + 2$, consider asking:

- “What 2 parts do you see on the 10-frame?”
- “What 2 parts do you see in each equation? Can you find an equation that shows the same parts that you see in the 10-frame?”

Activity 2

10 min

Represent Equations with Fingers

Standards Alignments

Addressing	K.OA.A.1
Building Towards	K.OA.A.2

The purpose of this activity is for students to represent equations on fingers. In this activity, students become more comfortable recognizing and representing compositions and decompositions of 10 on their fingers. In future lessons, students may choose to use their fingers to help them find the number that makes 10 when added to a given number. In the activity

synthesis, students consider how 2 different drawings can represent the same equation.

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Make connections between both representations visible: fingers and equations. Invite students to identify where a number in the equation is represented in the finger drawing and vice versa.

Supports accessibility for: Visual-Spatial Processing, Organization

Materials to Gather

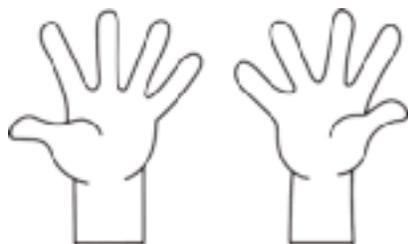
Crayons

Required Preparation

- Each student needs at least 2 different colored crayons.

Student-facing Task Statement

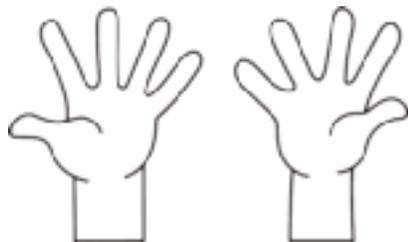
$$10 = 6 + 4$$



$$10 = 9 + 1$$



$$10 = 5 + 5$$



$$10 = 3 + 7$$

Launch

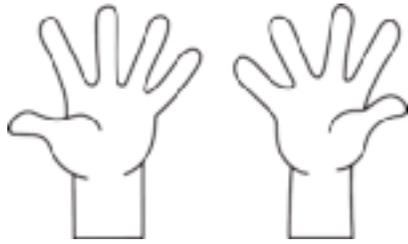
- Groups of 2
- Give each student at least 2 different colored crayons.
- “Color the fingers to show each equation.”

Activity

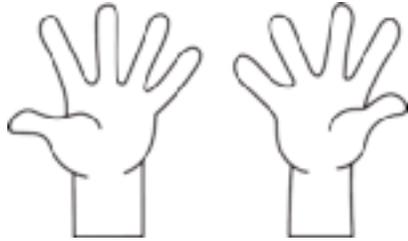
- 3 minutes: independent work time
- “As you continue working, tell your partner about the total and the 2 parts you colored in each set of fingers.”
- 3 minutes: partner work time

Synthesis

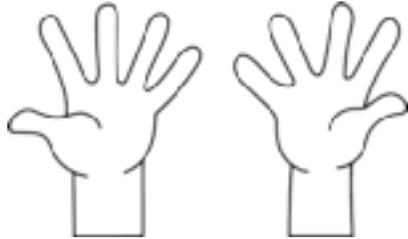
- Write $10 = 8 + 2$.
- Display a set of hands with 8 fingers colored blue and 2 fingers colored red.
- Display a set of hands with 8 fingers colored red and 2 fingers colored blue.
- “What is the same about how Elena and Tyler colored their hands? What is different about them?” (They both colored 8 and 2.)



$10 = 8 + 2$



$10 = 1 + 9$



Elena colored 8 blue and 2 red. Tyler colored 8 red and 2 blue.)

Student Responses

Students color each set of hands to represent the equation.

Advancing Student Thinking

If students color all of the fingers one color to represent $10 = 1 + 9$, consider asking:

- “What are the 2 parts that you see in the equation?”
- “How can you show the 2 different parts from the equation on the fingers? Which fingers show 1 from the equation? Which fingers show 9?”

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with counting, adding, composing, and decomposing numbers.

Students choose from any stage of previously introduced centers.

- Shake and Spill
- Counting Collections
- Roll and Add

Materials to Gather

Materials from previous centers

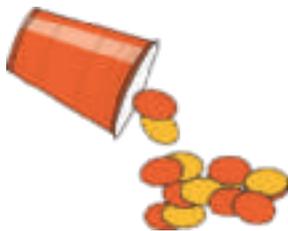
Required Preparation

- Gather materials from:
 - Shake and Spill, Stages 1–3
 - Counting Collections, Stage 1
 - Roll and Add, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Shake and Spill



Counting Collections



Roll and Add

Launch

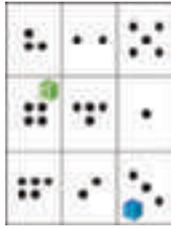
- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time
- “Choose what you would like to do next.”
- 10 minutes: center work time

Synthesis

- “Which center did you choose today? What



did you get better at while working in the center?"

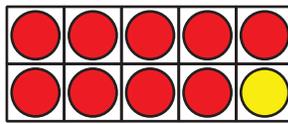
Lesson Synthesis

🕒 5 min

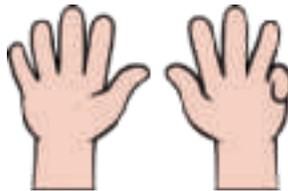
"Today we used equations to show many different ways to make 10."

Write $10 = 9 + 1$.

Display a 10-frame with 9 red counters and 1 yellow counter.



Hold up 9 fingers.



"Where do you see 10 on the 10-frame and on the fingers?" (There are 10 counters on the 10-frame. There are 10 fingers.)

"Where do you see 9? Where do you see 1?" (There are 9 red counters and 9 fingers up. There is 1 yellow counter and 1 finger down.)

Lesson 12: How Many Are Missing?

Standards Alignments

Addressing K.OA.A.3, K.OA.A.4

Teacher-facing Learning Goals

- Find the number that makes 10 when added to a given number.
- Match equations to compositions and decompositions of 10.

Student-facing Learning Goals

- Let's fill 10-frames in different ways.

Lesson Purpose

The purpose of this lesson is for students to compose and decompose 10 in multiple ways and find the number that makes 10 when added to a given number.

In a previous lesson, students matched equations to compositions and decompositions of 10. In the first activity, students show many different compositions and decompositions of 10 with red and yellow counters. Students may know 5 and 5 as a way to compose and decompose 10, because this structure is highlighted when using fingers and 10-frames. In this lesson, students develop familiarity with other ways to compose 10. In the second activity, students determine how many counters are needed to fill a 10-frame.

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Which One Doesn't Belong? (Warm-up)

Materials to Gather

- Cups: Activity 1
- Materials from previous centers: Activity 3
- Two-color counters: Activity 1, Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

Teacher Reflection Question

Reflect on your experience with the Which One Doesn't Belong warm-up in the curriculum. What moves or questions have improved the learning for each or your students during this routine? What improvements would you make next time?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 5, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.4

Student-facing Task Statement

Lesson observations

Student Responses

- Recognize that a full 10-frame contains 10 counters and that 2 hands have 10 fingers.
- Relate equations to compositions and decompositions of 10.
- Given a number, use the structure of 10-frames or fingers to determine how many more are needed to make 10.

----- **Begin Lesson** -----**Warm-up**

🕒 10 min

Which One Doesn't Belong: 10-frames

Standards Alignments

Addressing K.OA.A.3

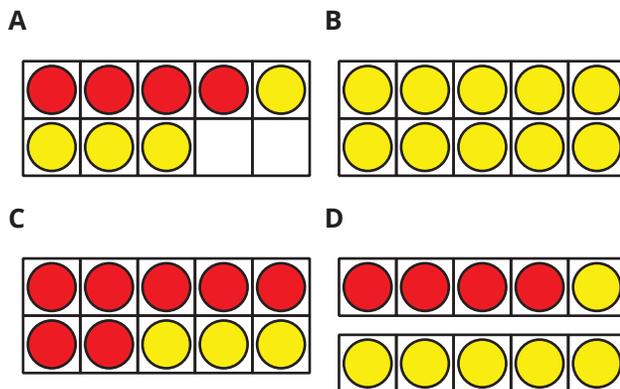
This warm-up prompts students to carefully analyze and compare features of four images. The activity also enables the teacher to hear the terminologies students know and how they talk about characteristics of the 10-frame and compositions and decompositions of 10.

Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?



Student Responses

Sample responses:

A doesn't belong because:

- It is the only one that doesn't have 10 counters.

B doesn't belong because:

- It is the only one that doesn't have red and yellow counters.

C doesn't belong because:

- It is the only one that has more red counters than yellow counters.

D doesn't belong because:

Launch

- Groups of 2
- Display the image.
- "Pick one that doesn't belong. Be ready to share why it doesn't belong."
- 1 minute: quiet think time

Activity

- "Discuss your thinking with your partner."
- 2-3 minutes: partner discussion
- Share and record responses.

Synthesis

- Display image D.
- "How many counters are there?" (10)
- "What parts do you see inside 10?" (4 and 6)
- Write $10 = 4 + 6$.
- "There are 10 counters, 4 red and 6 yellow. We can write that as 10 is 4 + 6."
- Invite students to chorally repeat the equation in unison 1-2 times.

- It is the only one that does not have a 10-frame.

Activity 1

🕒 10 min

Shake, Spill, and Arrange with 10

Standards Alignments

Addressing K.OA.A.3

The purpose of this activity is for students to compose and decompose 10 in multiple ways. Students shake and spill 10 counters and find an equation to match each composition and decomposition.

🌐 Access for English Learners

MLR8 Discussion Supports. Invite students to say each equation aloud. Listen for and clarify any questions about the equations.

Advances: Reading, Speaking

Materials to Gather

Cups, Two-color counters

Required Preparation

- Each group of 2 needs 1 cup and 10 two-color counters.

Student-facing Task Statement

$$10 = 5 + 5$$

$$10 = 9 + 1$$

$$10 = 4 + 6$$

Launch

- Groups of 2
- Give each group of students 10 two-color counters and a cup.
- "Take turns shaking and spilling all 10 counters. Arrange the counters in the 10-frame at the top of your page. Then put a check mark next to the equation that shows the red and yellow counters. If you get the same equation again, put another

$10 = 2 + 8$ $10 = 6 + 4$ $10 = 3 + 7$

$10 = 1 + 9$ $10 = 8 + 2$ $10 = 5 + 5$

Student Responses

Answers vary.

check mark next to it.”

Activity

- 6 minutes: partner work time

Synthesis

- Display $10 = 8 + 2$
- “Use your counters to show this equation.”
- “How many counters are there? What are the 2 parts that you see?” (There are 10 counters. There are 8 red counters and 2 yellow counters or 8 yellow and 2 red counters.)

Activity 2

🕒 10 min

How Many to Fill the 10-frame?

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to find how many counters are needed to fill a 10-frame. Students may count the number of empty squares or use counters to fill them. Students may be able to recognize how many counters are needed without counting. With repeated experience composing 10 in many ways, students may begin to know the combinations to make 10 (MP8).

🕒 Access for Students with Disabilities

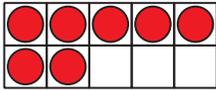
Engagement: Develop Effort and Persistence. Chunk this task into more manageable parts. Students can work on the first half of the problems and then move on to the second half. Check-in with students to provide feedback and encouragement after the first half has been worked on.
Supports accessibility for: Organization, Attention

Materials to Gather

Two-color counters

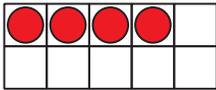
Student-facing Task Statement

1.



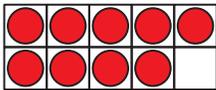
$10 = 7 + 3$ $10 = 8 + 2$ $10 = 5 + 5$

2.



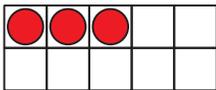
$10 = 8 + 2$ $10 = 1 + 9$ $10 = 4 + 6$

3.



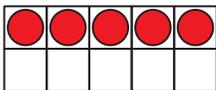
$10 = 9 + 1$ $10 = 5 + 5$ $10 = 7 + 3$

4.



$10 = 5 + 5$ $10 = 3 + 7$ $10 = 2 + 8$

5.



$10 = 9 + 1$ $10 = 6 + 4$ $10 = 5 + 5$

6.

Launch

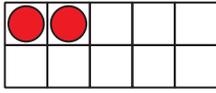
- Groups of 2
- Give students access to two-color counters.
- “Figure out how many counters are needed to fill each 10-frame. Write a number to show how many counters are needed to fill it.”
- “Circle the equation that shows the number of counters in the 10-frame and the number of counters needed to fill the 10-frame.”

Activity

- 3 minutes: independent work time
- 3 minutes: partner work time

Synthesis

- Display the image of 2 counters on a 10-frame.
- “Which equation did you circle for this 10-frame? Why?” (I circled $10 = 2 + 8$ because there are 2 red counters on the 10 frame. There are 8 empty squares, so I need 8 more counters to fill in the 10 frame.)
- Write $10 = 2 + 8$.
- “What does the 10 in this equation show?” (There are 10 squares in the 10-frame.)



$$10 = 1 + 9 \quad 10 = 2 + 8 \quad 10 = 4 + 6$$

Student Responses

1. 3, $10 = 7 + 3$
2. 6, $10 = 4 + 6$
3. 1, $10 = 9 + 1$
4. 7, $10 = 3 + 7$
5. 5, $10 = 5 + 5$
6. 8, $10 = 2 + 8$

Activity 3

⌚ 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with counting, adding, composing, and decomposing numbers.

Students choose from any stage of previously introduced centers.

- Shake and Spill
- Counting Collections
- Roll and Add

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Shake and Spill, Stages 1–3
 - Counting Collections, Stage 1

- Roll and Add, Stages 1 and 2

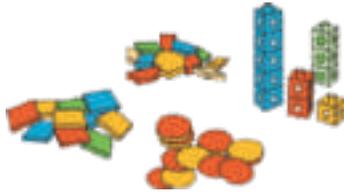
Student-facing Task Statement

Choose a center.

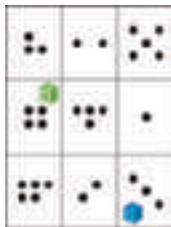
Shake and Spill



Counting Collections



Roll and Add



Launch

- “Today we are going to choose from centers we have already learned.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 10 minutes: center work time
- “Choose what you would like to do next.”
- 10 minutes: center work time

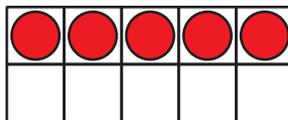
Synthesis

- “Have you ever been disappointed when it was time to switch or end centers because you wanted to keep playing? What did you do?”

Lesson Synthesis

🕒 5 min

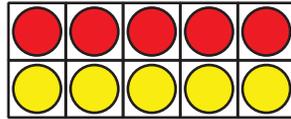
Display a 10-frame with 5 red counters.



“Jada spilled 10 counters. Here are the red counters Jada got when she was playing Shake and Spill.”

“How many yellow counters did Jada get? How do you know?” (The yellow counters fit in all the rest of the squares. There are 5 empty squares. She spilled 10 counters so the 10-frame should be full.)

Demonstrate filling the 10-frame with 5 yellow counters.



“What equation can we use to show Jada’s counters?” ($10 = 5 + 5$)

If needed, ask “How many counters are on the 10-frame? What are the 2 parts that you see?”

Lesson 13: Make 10

Standards Alignments

Addressing K.CC, K.OA.A.4
 Building Towards K.OA.A.4

Teacher-facing Learning Goals

- Fill in equations to represent compositions and decompositions of 10.
- Find the number that makes 10 when added to a given number.

Student-facing Learning Goals

- Let's make 10.

Lesson Purpose

The purpose of this lesson is for students to find the number that makes 10 when added to a given number.

In previous lessons, students used 10-frames and fingers to compose and decompose 10 in more than one way. In the previous lesson, students used the structure of a partially filled in 10-frame to determine how many more needed to be added to make 10. In this lesson, students develop strategies for finding the number that makes 10 when added to a given number.

While students may use any method that makes sense to them to find the given number, using 10-frames and fingers is highlighted because the structure allows students to see how many more are needed to make 10. As they choose a strategy, they will be making use of appropriate tools strategically (MP5).

Access for:

Students with Disabilities

- Engagement (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1

Materials to Copy

- Math Fingers Stage 4 Recording Sheet

- Materials from previous centers: Activity 3
- Two-color counters: Activity 2

(groups of 1): Activity 1

- Number Mat 1–9 (groups of 2): Activity 1
- 10-Frame Standard (groups of 1): Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	15 min
Activity 3	15 min
Lesson Synthesis	5 min
Cool-down	5 min

Teacher Reflection Question

What connections did students make between the different strategies shared? What questions did you ask to help make the connections more visible?

Cool-down (to be completed at the end of the lesson)

 5 min

Make 10

Standards Alignments

Addressing K.OA.A.4

Student-facing Task Statement

Write the number that makes 10 when added to each number.

5 _____
1 _____

Student Responses

- 5
- 9

----- Begin Lesson -----

Warm-up

🕒 10 min

How Many Do You See: Fingers Up and Down

Standards Alignments

Addressing K.CC
Building Towards K.OA.A.4

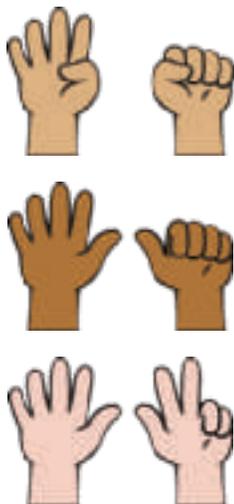
The purpose of this How Many Do You See is for students to subitize or use grouping strategies to describe the images they see. When students think about quantities in relation to 5 and 10, they look for and make use of structure (MP7).

Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?
How do you see them?



Student Responses

Sample responses:

- 4: I can see 4. 1 finger is down so there are 4.
- 6: There are 5 fingers on 1 hand and 1 more finger. 5 and 1 more is 6.
- 8: I see 5 fingers....6, 7, 8.

Launch

- Groups of 2
- “How many do you see? How do you see them?”
- Flash image.
- 30 seconds: quiet think time

Activity

- Display image.
- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- Display the hands showing 8 fingers.
- “How many fingers are up?” (8)
- “How many fingers need to go up so there are 10 fingers?” (2)
- Repeat the steps with the rest of the images.

Activity 1

🕒 10 min

Introduce Math Fingers, Make 10

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to learn stage 4 of the Math Fingers center. Students work in partners to show a number on their fingers and determine how many fingers are needed to make 10. Students fill in an equation to represent each composition and decomposition of 10.

🌐 Access for English Learners

MLR8 Discussion Supports. Use multimodal examples to clarify what it means to determine how many fingers are needed to make 10. For example, display a set of hands that have 10 fingers up to compare with another visual that does not have 10 fingers up.

Advances: Listening, Representing

Materials to Gather

Connecting cubes

Materials to Copy

Math Fingers Stage 4 Recording Sheet (groups of 1), Number Mat 1–9 (groups of 2)

Launch

- Groups of 2
- Give each group of students a connecting cube, a number mat, and a recording sheet.
- “We are going to learn a new way to do the Math Fingers center. It is called Math Fingers, Make 10.”
- Display and roll a connecting cube onto the number mat.
- “I rolled 7, so I am going to hold up 7 fingers.”
- “Now my partner needs to figure out how many more fingers I need to put up to show 10 fingers. How many more fingers do I need to hold up to make 10?” (3.)

- 30 seconds: quiet think time
- Share responses.
- Display the recording sheet.
- “Now we need to fill in an equation to show how many fingers are up and how many more fingers are needed to make 10. How should I fill in an equation?” ($7 + 3$)
- 30 seconds: quiet think time
- Share responses.
- “Take turns with your partner rolling to find a number and showing that number with your fingers. Your partner figures out how many more fingers are needed to make 10. You both fill in an equation to show how many fingers are up and how many more fingers are needed to make 10.”

Activity

- 7 minutes: partner work time

Synthesis

- “If Lin holds up 8 fingers, how many more fingers does she need to hold up to make 10? How do you know?” (2 fingers. I held up 8 fingers and counted 2 fingers that are down. I know that 8 and 2 make 10.)

Activity 2

🕒 15 min

Make 10

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to determine how many are needed to make 10 when added to a given number. Students may use 10-frames or fingers to help them make 10. As students choose how to determine how many are needed to make 10, they use appropriate tools strategically (MP5). Students fill in equations to show each way to compose and decompose 10. The purpose of the activity synthesis is to highlight different strategies students use based on the given number. These may include:

- using a 10-frame
- using fingers
- “just knowing” for numbers like 5 and 9

10-Frames are provided as a Instructional master. Students will continue to use these throughout the year. Consider copying them on cardstock or laminating them and keeping them organized to be used repeatedly.

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Chunk this task into more manageable parts. Check in with students to provide feedback and encouragement after they have completed the first 1–2 problems.

Supports accessibility for: Social-Emotional Functioning, Attention

Materials to Gather

Two-color counters

Materials to Copy

10-Frame Standard (groups of 1)

Student-facing Task Statement

3	_____	10 = _____ + _____
9	_____	10 = _____ + _____
2	_____	10 = _____ + _____
5	_____	10 = _____ + _____
7	_____	10 = _____ + _____
6	_____	10 = _____ + _____
8	_____	10 = _____ + _____
4	_____	10 = _____ + _____

Student Responses

1. 7, $10 = 3 + 7$
2. 1, $10 = 9 + 1$
3. 8, $10 = 2 + 8$

Launch

- Groups of 2
- Give students access to two-color counters and 10-frames.
- “Work with your partner to figure out which number you need to make 10 with each number. Once you both agree, write a number on the line. Then fill in an equation to show the parts to make 10.”

Activity

- 10 minutes: partner work time
- Monitor for students who use a 10-frame and counters or fingers.

4. 5, $10 = 5 + 5$
5. 3, $10 = 7 + 3$
6. 4, $10 = 6 + 4$
7. 2, $10 = 8 + 2$
8. 6, $10 = 4 + 6$

Synthesis

- Invite a student who used a 10-frame and counters to share how they figured out how to make 10 with 2.
- “What are the 2 parts that they used to make 10?” (2 and 8.)
- Invite a student who used fingers to share how they figured out how to make 10 with 6.
- “What equation should they write? How do you know?” (They should write $10 = 6 + 4$ because 6 and 4 go together to make 10.)
- “Were there any numbers that you just knew how many more you needed to make 10?” (I knew that 5 and 5 is 10. I knew that if there are 9, you only need 1 more to make 10.)

Advancing Student Thinking

If students find a number other than 7 to make 10 with 3, consider asking:

- “What are you trying to figure out?”
- “How can a 10-frame or your fingers help you figure out what number you need to make 10?”

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with counting, adding, composing, and decomposing numbers.

Students choose from any stage of previously introduced centers.

- Math Fingers
- Shake and Spill

- Counting Collections
- Roll and Add

Materials to Gather

Materials from previous centers

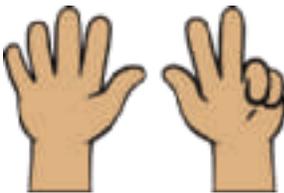
Required Preparation

- Gather materials from:
 - Math Fingers, Stages 1-4
 - Shake and Spill, Stages 1-3
 - Counting Collections, Stage 1
 - Roll and Add, Stages 1 and 2

Student-facing Task Statement

Choose a center.

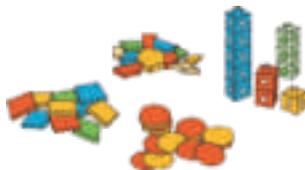
Math Fingers



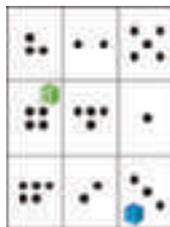
Shake and Spill



Counting Collections



Roll and Add



Launch

- “Today we are going to choose from centers we have already learned. You can also keep playing Math Fingers.”
- Display the center choices in the student book.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time
- “Choose what you would like to do next.”
- 8 minutes: center work time

Synthesis

- Write $10 = 1 + 9$
- “This is the equation that Clare wrote. What did Clare’s fingers look like? How do you know?” (She held up 1 finger. She figured

out that she needed 1 more finger to make 10.)

Lesson Synthesis

🕒 5 min

“Why are our fingers a helpful tool if we want to find different ways to make 10?” (We have 10 fingers. We can show different numbers on our fingers. We can put some fingers up and figure out how many fingers are still down.)

Write 3.

“Show your partner how you can use your fingers to figure out what number goes with 3 to make 10.”

Write $10 = 3 + 7$

“10 is 3 plus 7. 3 and 7 are 2 parts that go together to make 10.”

Complete Cool-Down

Response to Student Thinking

Students write numbers other than 5 and 9 to show the numbers needed to make 10 with 5 and 1.

Next Day Support

- During the launch of the next day's activity, have students use counters and a 10-frame to represent the problems in the cool-down.

Lesson 14: Towers of 10

Standards Alignments

Addressing K.CC.A.3, K.OA.A.4
 Building Towards K.OA.A.3

Teacher-facing Learning Goals

- Find the number that makes 10 when added to a given number.

Student-facing Learning Goals

- Let's figure out how many cubes are hidden.

Lesson Purpose

The purpose of this lesson is for students to practice finding the number that makes 10 when added to a given number.

In previous lessons, students composed and decomposed 10 in multiple ways and found the number that makes 10 when added to a given number. In this lesson, students determine how many cubes are hidden when a tower of 10 connecting cubes is broken into 2 parts and only 1 part is visible. Determining how many more are needed to make 10 is more challenging with connecting cubes than with a 10-frame or fingers because students cannot use the structure of the 10-frame or fingers and simply count the empty squares or the fingers that are down. The goal of the lesson synthesis is for students to reflect on the different tools they have used to compose and decompose 10.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

What Do You Know About ____? (Warm-up)

Materials to Gather

- 10-frames: Activity 1, Activity 2
- Connecting cubes: Activity 1, Activity 2
- Materials from previous centers: Activity 3

Materials to Copy

- What's Behind My Back Stage 2 Recording Sheet Kindergarten (groups of 1): Activity 1

- Two-color counters: Activity 1, Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	5 min

Teacher Reflection Question

As you finish up this unit, reflect on the norms and activities that have supported each student in learning math. List ways you have seen each student grow as a young mathematician throughout this work. List ways you have seen yourself grow as a teacher. What will you continue to do and what will you improve on in the next unit?

Cool-down (to be completed at the end of the lesson)

🕒 0 min

Unit 5, Section C Checkpoint

Standards Alignments

Addressing K.OA.A.4

Student-facing Task Statement

Lesson observations

Student Responses

- Given a number, use the structure of 10-frames or fingers to determine how many more are needed to make 10.
- Given a number, use connecting cubes to determine how many more are needed to make 10.
- Given a number, know how many more are needed to make 10.

----- **Begin Lesson** -----

Warm-up

🕒 10 min

What Do You Know About 10?

Standards Alignments

Addressing K.CC.A.3
 Building Towards K.OA.A.3

The purpose of this What Do You Know About ____ is to invite students to share what they know and how they can represent the number 10.

Instructional Routines

What Do You Know About ____?

Student-facing Task Statement

What do you know about 10?

Student Responses

Sample responses:

- We have 10 fingers.
- 5 and 5 is 10.
- There are 10 squares on a 10-frame.
- 10 is 1 more than 9.

Launch

- Display the number.
- “What do you know about 10?”
- 1 minute: quiet think time

Activity

- Record responses.
- “How could we show the number 10?”

Synthesis

- “Tell your partner 2 different ways that we can make 10.”

Activity 1

 15 min

Introduce What’s Behind My Back?, 10 Cubes

 PLC Activity

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to learn stage 2 of the What’s Behind My Back center.

Students snap a tower of 10 cubes into two parts and hide one part behind their back. Then, their partner determines how many connecting cubes are hidden. Students may use connecting cubes, 10-frames and counters, fingers, or drawings to figure out how many connecting cubes are hidden. As they choose a strategy, they will be making use of appropriate tools strategically (MP5). Monitor for students who:

- create another tower of 10 connecting cubes, snap it into two pieces to show the cubes that are showing and then count the rest of the cubes to determine how many cubes are hidden
- hold up the same number of fingers as the number of connecting cubes that are showing and count the number of fingers that are down to determine how many connecting cubes are hidden
- place counters on a 10-frame to represent the connecting cubes that are showing and count the empty squares to determine how many connecting cubes are hidden

Materials to Gather

10-frames, Connecting cubes, Two-color counters

Materials to Copy

What's Behind My Back Stage 2 Recording Sheet Kindergarten (groups of 1)

Required Preparation

- Each group of 2 need 20 connecting cubes.

Launch

- Groups of 2
- Give each group of students 20 connecting cubes. Give each student a recording sheet and access to two-color counters and 10-frames.
- "We are going to learn a new way to play the What's Behind My Back? center."
- "Work with your partner to make one tower with 10 connecting cubes."
- 1 minute: partner work time
- "Choose who will go first. Snap the tower into two parts and hide one of the parts behind your back. Show your partner the other part."
- 30 seconds: partner work time
- "Figure out how many cubes are hidden"

behind your partner's back."

- 2 minutes: independent work time
- "Draw or color the connecting cube tower to show the two parts that the tower snapped into. Work together to fill in an equation to show the total number of connecting cubes in the tower and the two parts that the tower snapped into."
- 2 minutes: partner work time
- "Take turns snapping the tower of 10 cubes and hiding one part."

Activity

- 8 minutes: partner work time
- Monitor for students who use the methods outlined in the activity narrative.

Synthesis

- Select previously identified students to share.
- "How did making another tower of 10 cubes help you figure out how many cubes were hidden?"
- "How did your fingers help you figure out how many cubes were hidden?"
- "How did putting counters on the 10-frame help you figure out how many cubes were hidden?"

Activity 2

🕒 10 min

How Many Cubes Are Hidden?

Standards Alignments

Addressing K.OA.A.4

The purpose of this activity is for students to determine how many are needed to make 10 when added to a given number. This activity is presented as the same context as the first activity, except students are not shown the visual of the cubes. Because the context is connecting cubes, one natural way to determine how many cubes are hidden is to create and snap a tower of 10 cubes. Students may also use their fingers or put counters on a 10-frame. As they choose a strategy, they reason abstractly and quantitatively (MP2) and they may choose to use appropriate tools strategically (MP5).

Access for English Learners

MLR8 Discussion Supports. Invite students to say each equation aloud. Listen for and clarify any questions about the equations.

Advances: Reading, Speaking

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to plan a strategy, including what drawings, numbers, words, or objects they will use to determine how many cubes Han is hiding.

Supports accessibility for: Conceptual Processing, Organization

Materials to Gather

10-frames, Connecting cubes, Two-color counters

Student-facing Task Statement

Han had a tower of 10 cubes.

He snapped it into 2 parts and hid 1 part behind his back.

He showed his partner 4 cubes.

How many cubes is Han hiding behind his back?

$$10 = \underline{\quad} + \underline{\quad}$$

Student Responses

6 cubes are behind his back. $10 = 4 + 6$

Launch

- Groups of 2
- Give students access to connecting cubes, two-color counters, and 10-frames.
- Read and display the task statement.
- “Show your thinking using drawings, numbers, words, or objects.”

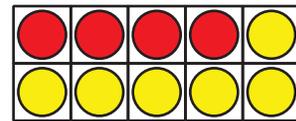
Activity

- 3 minutes: independent work time
- 2 minutes: partner work time
- Monitor for students who build a tower and snap off 4 cubes to figure out how many cubes are missing.

- “Fill in an equation to show Han’s cubes.”
- 1 minute: partner work time

Synthesis

- Invite students who built towers of connecting cubes to show how they figured out how many cubes were hidden.
- Display a 10-frame with 4 red counters and 6 yellow counters. Display a tower of 10 connecting cubes broken into 4 and 6:



- “How is making 10 with connecting cubes the same as using a 10-frame?” (I get the same combinations of numbers to make 10. 4 connecting cubes and 6 connecting cubes make 10 just like with counters.)

Advancing Student Thinking

If students are unsure of how to find the missing part, consider asking:

- “Can you use cubes to show what happened in the story?”
- “How can you use the cubes to help you figure out how many cubes Han was hiding behind his back?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with counting, adding, composing, and decomposing numbers.

Students choose from any stage of previously introduced centers.

- What's Behind My Back?
- Math Fingers
- Shake and Spill
- Counting Collections
- Roll and Add

Materials to Gather

Materials from previous centers

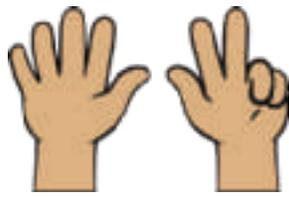
Required Preparation

- Gather materials from:
 - What's Behind My Back, Stages 1 and 2
 - Math Fingers, Stages 1-4
 - Shake and Spill, Stages 1-3
 - Counting Collections, Stage 1
 - Roll and Add, Stages 1 and 2

Student-facing Task Statement

Choose a center.

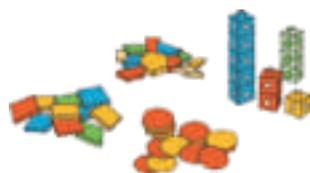
What's Behind My Back? Math Fingers



Shake and Spill



Counting Collections



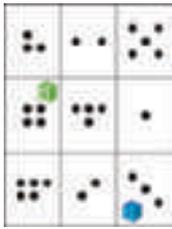
Launch

- Give students access to 10-frames,
- "Today we are going to choose from centers we have already learned. You can also continue playing What's Behind my Back?"
- Display the center choices in the student book.
- "Think about what you would like to do first."
- 30 seconds: quiet think time

Activity

- Invite students to work at the center of their choice.
- 8 minutes: center work time

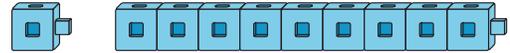
Roll and Add



- “Choose what you would like to do next.”
- 8 minutes: center work time

Synthesis

- Display a tower of 10 cubes, snapped into 9 cubes and 1 cube.

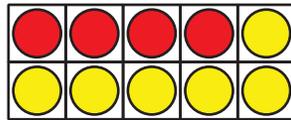


- “What are the parts that make 10 that Elena found?” (9 and 1)
- “What equation can Elena write?”
($10 = 9 + 1$)

Lesson Synthesis

⌚ 5 min

Display a 10-frame with 4 red and 6 yellow counters.



Display 10 connecting cubes snapped into towers of 1 and 9.



Display 10 fingers.



Write $10 = 7 + 3$.

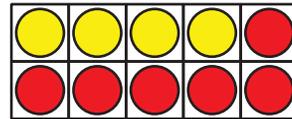
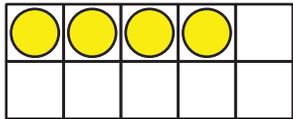
“We have looked at lots of ways to make 10: 10-frames, fingers, expressions and equations, and towers of connecting cubes.”

“What is your favorite way to make 10? Why is it your favorite?”

Student Section Summary

In this section, we found many different ways to make 10.

We used a 10-frame and our fingers to show numbers and figure out how many more are needed to make 10.



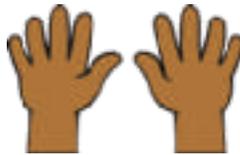
There are 4 counters.

We need 6 more counters to make 10.



There are 9 fingers.

We need to put up 1 more finger to make 10.



We used equations to show different ways to make 10.

$$10 = 4 + 6$$

$$10 = 9 + 1$$

Lesson 15: Lots of Fruit (Optional)

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

Building Towards K.OA.A.2

Teacher-facing Learning Goals

- Solve addition and subtraction story problems.

Student-facing Learning Goals

- Let's make up story problems and solve them.

Lesson Purpose

The purpose of this lesson is for students to write and solve their own Put Together/Take Apart, Both Addends Unknown story problems.

This lesson is optional because it does not address any new mathematical content standards. This lesson does provide students with an opportunity to apply precursor skills of mathematical modeling. In previous lessons, students represented and solved Put Together/Take Apart, Both Addends Unknown story problems. This lesson builds on students' experience in the Math Stories center.

In this lesson, students use familiar contexts to generate and solve Put Together/Take Apart, Both Addends Unknown story problems. In the second activity, students are encouraged to find all possible solutions and use reasoning based on patterns explored in previous lessons (MP8).

When students attend to the mathematical features of a situation, adhere to mathematical constraints, make choices, and translate a mathematical answer back into the context they model with mathematics (MP4).

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1
- Two-color counters: Activity 1, Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	20 min
Lesson Synthesis	10 min

Materials to Copy

- Number Mat 4-10 (groups of 1): Activity 1

Teacher Reflection Question

What language did students use as they made up their problems? How has the language that students use progressed throughout the unit?

----- **Begin Lesson** -----

Warm-up

🕒 10 min

Notice and Wonder: Fruit Stand

Standards Alignments

Building Towards K.OA.A.2

The purpose of this warm-up is to draw students' attention to story contexts, which will be useful when students make story problems about fruit in a later activity.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?

Launch

- Groups of 2
- Display the image.
- "What do you notice? What do you wonder?"



Student Responses

Students may notice:

- There is a fruit stand.
- There is a sign with an arrow.
- There are watermelons, bananas, oranges, and other fruit.

Students may wonder:

- What kinds of fruit are there?
- How many pieces of fruit are there? How many watermelons are there?
- What is the price of each fruit?

- 1 minute: quiet think time

Activity

- “Discuss your thinking with your partner.”
- 1 minute: partner discussion
- Share and record responses.

Synthesis

- “What are some other situations that involve fruit?” (shopping for fruit, paleta flavors, fruit in baskets and on shelves, people and animals picking and eating fruit, fruit that comes in more than one color, making juice, growing fruit)

Activity 1

🕒 20 min

Fruit Story Problems

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

The purpose of this activity is for students to generate Put Together/Take Apart, Both Addends Unknown story problems involving fruit.

In the activity synthesis, students select at least one problem to share with a different group in

preparation for the next activity.

Access for English Learners

MLR8 Discussion Supports. Create a display that includes labeled images of each type of fruit. Invite students to chorally repeat the name of each fruit in unison 1–2 times.

Advances: Speaking, Reading

Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Check for understanding by inviting students to rephrase directions in their own words.

Supports accessibility for: Memory, Organization

Materials to Gather

Connecting cubes, Two-color counters

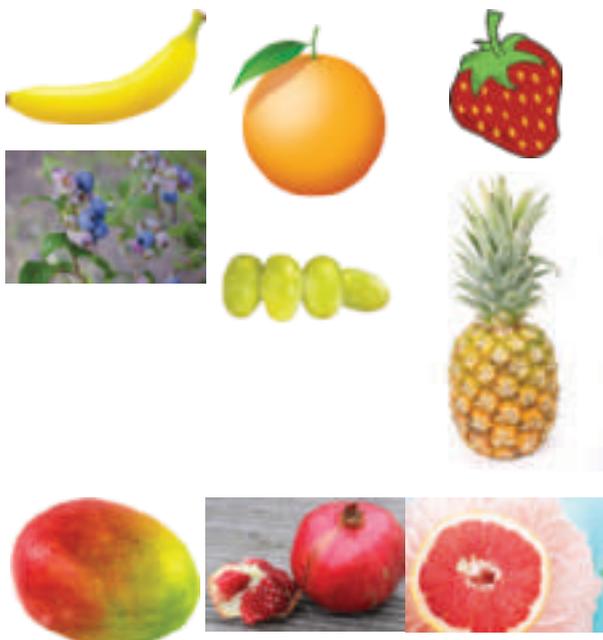
Materials to Copy

Number Mat 4-10 (groups of 1)

Required Preparation

- Each group of 2 needs 1 connecting cube.

Student-facing Task Statement



Solve the story problem.

Launch

- Groups of 2
- Give each group of students a number mat, a connecting cube, and access to two-color counters.
- Display the student page and number mat.
- “We’re going to tell math stories using two different kinds of mats. What do you notice?” (One mat has pictures of fruit and the other has numbers.)
- 30 seconds: quiet think time
- Share responses.
- “I will roll the cube onto the fruit mat. This tells me which fruit to tell a story about.”
- “I will roll the cube onto the number mat. This tells me how many pieces of fruit I have altogether.”
- Demonstrate telling a Put Together/Take

Show your thinking using objects, drawings, numbers, or words.

Student Responses

Sample responses:

1. My dad bought 7 mangoes. He gave some of them to Elena and some of them to Diego. How many mangoes did he give to Elena? Then how many mangoes did he give to Diego?

Partner uses drawing, numbers, word, or objects to show combinations of 7 mangoes.

2. I put 4 slices of fruit into a bowl. Some are mango and some are pineapple. How many mango slices are in the bowl? Then how many pineapple slices are in the bowl?

Partner uses drawing, numbers, word, or objects to show combinations of 4 mangoes and pineapple.

Apart, Both Addends Unknown story problem with the class. Keep the example displayed as students work.

- “You will tell story problems about fruit. First, roll the cube to find out your fruit and your number. Then tell a story about that many pieces of fruit without telling how many of each kind of fruit there are. The questions in your story should ask about how many of each type there could be. You can write words or draw pictures to help you remember the story problem that you create.”

Activity

- 5 minutes: independent work time

Synthesis

- “Tell your partner your story problem.”
- 1 minute: partner discussion
- “Solve the story problem your partner told you. Show your thinking using objects, drawings, numbers, or words.”
- 5 minutes: partner work time

Activity 2

🕒 20 min

All the Solutions

Standards Alignments

Addressing K.OA.A.1, K.OA.A.2, K.OA.A.3

The purpose of this activity is for students to find all possible solutions to a Put Together/Take Apart, Both Addends Unknown story problem using patterns that were investigated in previous lessons. In previous lessons students have found more than 1 solution to a Put Together/Take Apart, Both Addends Unknown story problem. Students are encouraged to find all possible

solutions in this optional activity, which is not required by the standards. As students share their solutions, encourage them to record their drawings and solutions systematically. Pair students with a different partner than in the previous activity.

Materials to Gather

Two-color counters

Required Preparation

- Each group of 2 needs at least 10 two-color counters.

Student-facing Task Statement

Show your thinking using drawings, numbers, words, or objects.

Student Responses

Sample response:

I made 2 snack bags with 9 berries. I put some blueberries into each bag. How many blueberries are in each bag?

Students show their solutions with words, drawing, or numbers:

- 8 in bag 1 and 1 in bag 2
- 7 in bag 1 and 2 in bag 2
- 6 in bag 1 and 3 in bag 2
- 5 in bag 1 and 4 in bag 2
- 4 in bag 1 and 5 in bag 2
- 3 in bag 1 and 6 in bag 2
- 2 in bag 1 and 7 in bag 2
- 1 in bag 1 and 8 in bag 2

Launch

- Groups of 2.
- Give students access to two-color counters.
- “Tell your new partner your story problem.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- “What are you trying to figure out?”
- 30 seconds: quiet think time
- 1 minute: partner discussion

Activity

- “Work with your partner to show as many possible solutions for the story problem as you can.”
- “Show your thinking using drawings, numbers, words, or objects.”
- 5 minutes: partner work time
- As students work consider asking:
 - “Do you think you found all the solutions for your problem?”
 - “How can you organize your work to show that you have all the solutions?”

Synthesis

- Invite students to share their stories and solutions.
- Record each student solution with an equation.

Lesson Synthesis

🕒 10 min

“In the story problems, we saw that there were a lot of different solutions. How can we organize our work to show that we have all the solutions?” (We can make a list. We can organize the counters.)

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Family Support
Materials

Family Support Materials

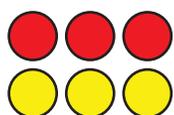
Composing and Decomposing Numbers to 10

In this unit, students compose and decompose numbers to 10 in different ways. We call this “making” and “breaking apart” numbers.

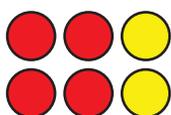
Section A: Compose and Decompose Numbers to 9

In this section, students compose and decompose numbers to 9. At first, students only work with numbers up to 5 to build fluency with addition and subtraction within 5 as they compose and decompose numbers in different ways.

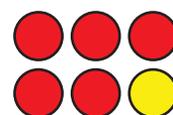
Students understand that there are different ways to compose and decompose a given number. They work with physical objects, such as counters and connecting cubes, that they can use to compose and decompose numbers.



6 is 3 and 3



6 is 4 and 2



6 is 5 and 1

Section B: More Types of Story Problems

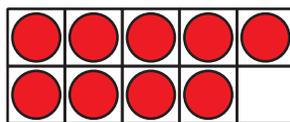
In this section, students represent and solve story problems. Students compose and decompose numbers as they solve story problems where both addends are unknown. For example,

Jada made 6 paletas with her brother.
They made two flavors, lime and coconut.
How many of the paletas were lime?
Then how many of the paletas were coconut?

These problems may be more challenging to make sense of because there is no action in the story and they have more than one solution. By the end of the section, students find multiple solutions to problems. Students use math tools and drawings to represent and solve story problems. It is important that students can explain how their representation shows the story. Some students may be interested in finding all the solutions to a problem and they should be encouraged to do so, though this is not an expectation for kindergarten.

Section C: Make and Break Apart 10

The number 10 is foundational to the place value work students will do in later grades. In this section, students are introduced to a 10-frame by putting together two 5-frames which allows them to build on previous understandings of the numbers 6–9 in relation to 5.



Students use the 10-frame, as well as their fingers, to make and break apart 10 in different ways. These tools are helpful because the blank squares in the 10-frame and the fingers that are down allow students to see or count how many more are needed to make 10. Students use these tools to figure out the number to add to any number from 1 to 9 to make 10.

Try it at home!

Near the end of the unit, ask your student to draw a picture that goes with this story:

At the market, you get 10 apples from a bin.

Some of the apples are green and some of the apples are red.

How many of the apples are green?

Then, how many of the apples are red?

Questions that may be helpful as they work:

- Explain your picture to me.
- How many green apples and how many red apples did you draw?
- Does this story match the expression $10 = 1 + 9$, $10 = 2 + 8$, $10 = 3 + 7$, $10 = 4 + 6$ or $10 = 5 + 5$? How do you know?
- Is there another way you can make 10 apples?

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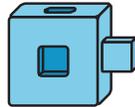
Unit Assessments

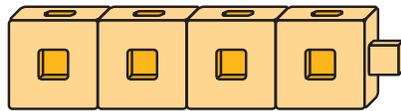
End-of-Unit Assessment

Composing and Decomposing Numbers to 10: End-of-Unit Assessment

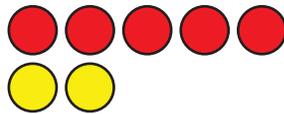
1. Write an expression for each picture.

a.





b.



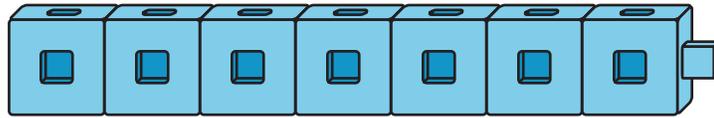
2. Write the number that makes 10 with each number.

a. 5 _____

b. 9 _____

c. 4 _____

3. Mai has a train of 7 connecting cubes.



She snaps the train into two pieces.

Show 1 way to snap the cubes.

Show a different way to snap the cubes.

4. Diego has 3 toy cars on the floor.

He has 5 more toy cars on his bed.

How many toy cars does Diego have altogether?

Show your thinking using drawings, numbers, or words.

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Assessment Answer Keys

Check Your Readiness A, B and C
End-of-Unit Assessment

Assessment Answer Keys

Assessment: Section A Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Compose and decompose numbers up to 9 in more than 1 way.
 - Understand that numbers can be composed or decomposed in different ways.
 - Compose and decompose numbers in different ways.
 - Represent decompositions with a drawing.
- Write expressions to represent decompositions.
 - Represent decompositions with an expression.

Assessment: Section B Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- Solve addition and subtraction story problems within 10.
 - Accurately retell a story problem in their own words.
 - Use objects or drawings to represent a story problem.
 - Explain how objects or drawings represent a story problem.
 - Use labels, colors, numbers, or other methods to represent the two groups in a story problem.

Assessment: Section C Checkpoint

Teacher Instructions

For this Checkpoint Assessment, a full checklist for observation of students can be found in the Assessments for this unit. The content assessed is listed below for reference.

- For any number from 1 to 9, find the number that makes 10 when added to the given number.
 - Recognize that a full 10-frame contains 10 counters and that 2 hands have 10 fingers.
 - Relate equations to compositions and decompositions of 10.
 - Given a number, use the structure of 10-frames or fingers to determine how many more are needed to make 10.
 - Given a number, use connecting cubes to determine how many more are needed to make 10.
 - Given a number, know how many more are needed to make 10.

Assessment: End-of-Unit Assessment

Teacher Instructions

Give students access to 10-frames and connecting cubes or two-color counters.

Problem 1

Standards Alignments

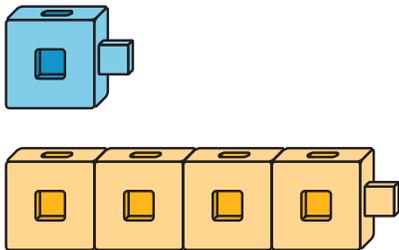
Addressing K.OA.A.1

Narrative

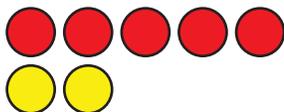
Students write an expression matching a picture which shows two different groups put together. One picture uses connecting cubes and the other uses counters, the two main representations students have worked with in this unit. A student may respond with the total, 5 for the connecting cubes and 7 for the counters. This does not necessarily mean that they do not understand how to write an expression. They could have misinterpreted or not carefully listened to or read the question. The teacher may want to ask the student specifically for an expression and show them some examples of expressions to make sure they understand what they are being asked.

Write an expression for each picture.

a.



b.



Solution

- a. $1 + 4$ or $4 + 1$
- b. $5 + 2$ or $2 + 5$

Problem 2**Standards Alignments**

Addressing K.OA.A.4

Narrative

Students find the number that makes 10 with given numbers. The problem is without context and without representation. Students may use their fingers, draw a picture, or use two-color counters and a 10-frame to solve each problem.

Write the number that makes 10 with each number.

- a. 5 _____
- b. 9 _____
- c. 4 _____

Solution

- a. 5
- b. 1
- c. 6

Problem 3**Standards Alignments**

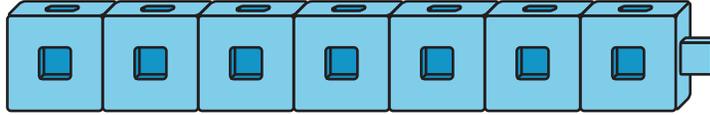
Addressing K.OA.A.3

Narrative

Students write a number less than 10 as a sum of two numbers in more than one way. In this item, the number is presented via an image within the context of the game of snap which students played during this unit. Students may count the total number of cubes incorrectly rather than using

the given information that there are 7 cubes. If they do so, their responses may still be correct for their count. They may also draw pictures instead of giving their answers as numbers.

Mai has a train of 7 connecting cubes.



She snaps the train into two pieces.

Show 1 way to snap the cubes.

Show a different way to snap the cubes.

Solution

Sample responses: 4 cubes and 3 cubes, 5 cubes and 2 cubes

Problem 4

Standards Alignments

Addressing K.OA.A.2

Narrative

Students solve a Put Together, Total Unknown story problem in a way that makes sense to them. They may answer with numbers or with a drawing. If they make a drawing, they may or may not label the two different parts. Labeling does not influence the answer for the problem because the problem asks for the total.

Students worked extensively with Both Addends Unknown problems in this unit but the language of these problems is challenging and so they do not appear on this written assessment. We recommend doing this type of problem in a personal interview with students. There is an example in the End of Course assessment which can be used for this purpose.

Diego has 3 toy cars on the floor.

He has 5 more toy cars on his bed.

How many toy cars does Diego have altogether?

Show your thinking using drawings, numbers, or words.

Solution

8. Sample response: 3 + 5 is 8.

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Lesson
Cool Downs

Lesson 3: Snap the Cubes

Cool Down: Break Apart 6

Show 2 ways to break apart 6 into 2 parts.

Show your thinking using objects, drawings, numbers, or words.

Lesson 8: More Than One Way

Cool Down: Both Addends Unknown

Kiran bought 6 plums at the store.

Some of the plums were red.

The rest of the plums were purple.

How many of the plums were red?

Then how many of the plums were purple?

Show your thinking using objects, drawings, numbers, or words.

Lesson 13: Make 10

Cool Down: Make 10

Write the number that makes 10 when added to each number.

5 _____

1 _____

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Instructional
Masters

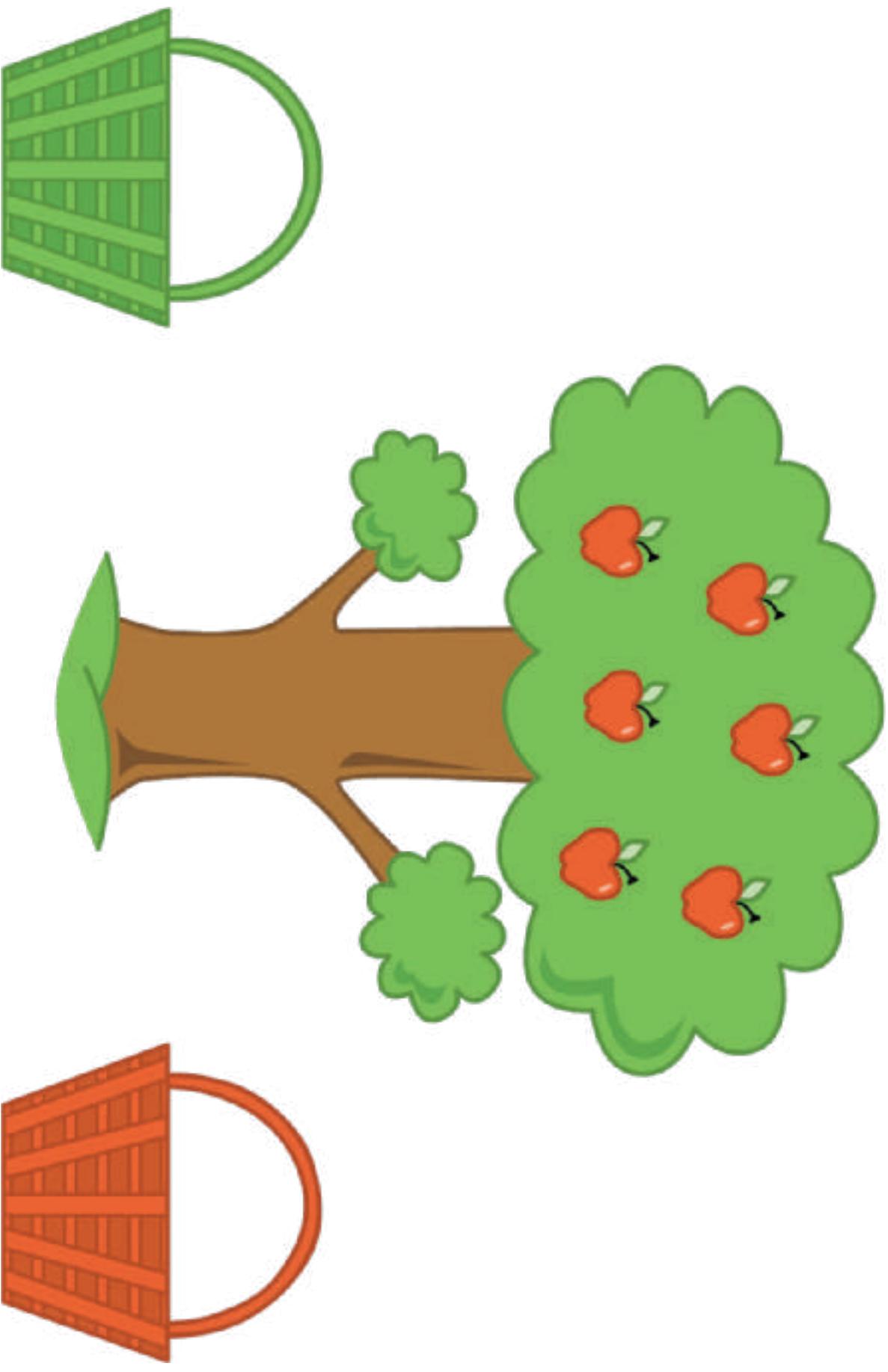
Instructional Masters for Composing and Decomposing Numbers to 10

address	title	students written per copy	requires on?	cutting? recommended?	card stock recommended?	color paper recommended?
Assessment Kindergarten.5	Checkpoint	0	yes	no	no	no
Activity Kindergarten.5.7.3	Math Stories Stage 3 Pictures	8	no	no	no	no
Center	Math Stories Stage 3 Pictures	8	no	no	no	no
Activity Kindergarten.5.5.3	Make or Break Apart Numbers Stage 1 Recording Sheet	1	yes	no	no	no
Center	Make or Break Apart Numbers Stage 1 Recording Sheet	1	yes	no	no	no
Activity Kindergarten.5.5.3	Make or Break Apart Numbers Stage 1 Dot Page	2	no	no	no	no
Center	Make or Break Apart Numbers Stage 1 Dot Page	2	no	no	no	no
Activity Kindergarten.5.13.2	10-Frame Standard	1	no	no	yes	no
Assessment Kindergarten.5	Checkpoint	0	yes	no	no	no
Activity Kindergarten.5.1.3	Check It Off Stage 1 Recording Sheet Kindergarten	1	yes	no	no	no
Activity Kindergarten.5.13.1	Number Mat 1-9	2	no	no	no	no

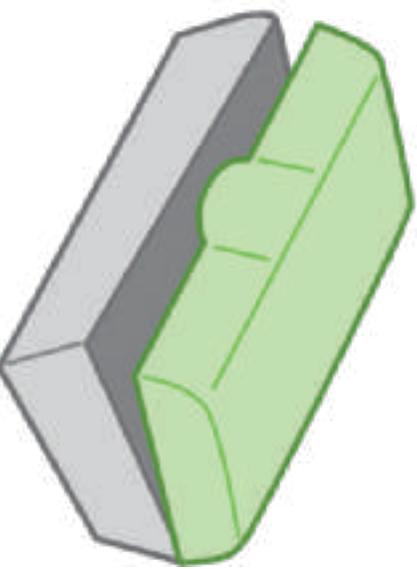
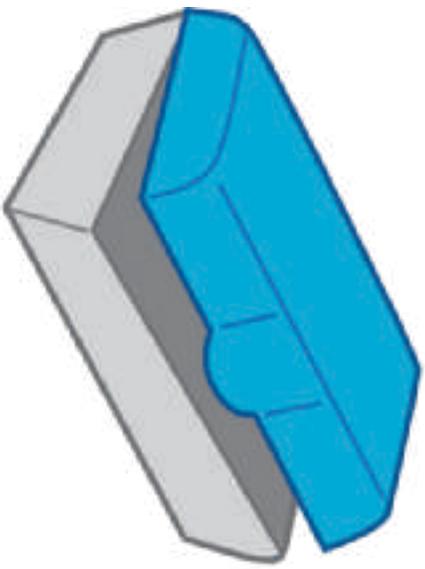
Activity Kindergarten.5.10.2	Numbers on Fingers and 10-frames	1	no	no	no	no	no
Activity Kindergarten.5.15.1	Number Mat 4-10	1	no	no	no	no	no
Activity Kindergarten.5.13.1	Math Fingers Stage 4 Recording Sheet	1	yes	no	no	no	no
Center	Math Fingers Stage 4 Recording Sheet	1	yes	no	no	no	no
Assessment Kindergarten.5	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.5.3.1	What's Behind My Back Stage 1 Recording Sheet	1	yes	no	no	no	no
Center	What's Behind My Back Stage 1 Recording Sheet	1	yes	no	no	no	no
Activity Kindergarten.5.5.3	Make or Break Apart Numbers Stage 1 Number Mat 4 - 9	1	no	no	no	no	no
Center	Make or Break Apart Numbers Stage 1 Number Mat 4 - 9	1	no	no	no	no	no
Activity Kindergarten.5.7.3	Math Stories Stage 3 Recording Sheet	1	yes	no	no	no	no
Center	Math Stories Stage 3 Recording Sheet	1	yes	no	no	no	no
Activity Kindergarten.5.14.1	What's Behind My Back Stage 2 Recording Sheet Kindergarten	1	yes	no	no	no	no
Center	What's Behind My Back Stage 2 Recording Sheet Kindergarten	1	yes	no	no	no	no

Activity Kindergarten.5.10.1	5-Frames to Cut Out	1	no	yes	no	no
Center	Check It Off Stage 1 Recording Sheet Grade K	1	yes	no	no	no
Center	Check It Off Stage 1 Recording Sheet Grade 1	1	yes	no	no	no
Center	Find the Value of Expressions within 10 Stage 1 Cards	2	no	yes	no	no
Center	Find the Value of Expressions within 10 Stage 1 Recording Sheet	1	yes	no	no	no
Center	Shake and Spill Stage 3 Recording Sheet Kindergarten	1	yes	no	no	no
Center	Shake and Spill Stage 3 Recording Sheet Grade 1	1	yes	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no	no
Center	Bingo Stage 1 Cards	4	no	yes	no	no
Center	Dot Mat 1-5 (dots and 5-frames)	2	no	no	no	no
Center	5-Frame	1	no	no	yes	no
Center	5-Frame	1	no	no	yes	no
Center	Number Mat 1-5	2	no	no	no	no
Center	Number Mat 1-5	2	no	no	no	no
Center	Number Mat 1-5	2	no	no	no	no
Center	5-frames Stages 1 and 2 Recording Sheet	1	yes	no	no	no

Center	5-frames Stages 1 and 2 Recording Sheet	1	yes	no	no	no
Center	Math Stories Stage 1 and 4 Pictures	8	no	no	no	no
Center	Math Stories Stage 1 Recording Sheet	2	yes	no	no	no
Center	Math Stories Stage 2 Recording Sheet	2	yes	no	no	no
Center	Math Stories Stage 2 Backgrounds	6	no	no	no	no
Center	Counting Collections Stages 1 and 2 Recording Sheet	1	yes	no	no	no
Center	Roll and Add Stage 1 Dot Images Mat	1	no	no	no	no
Center	Roll and Add Stage 1 Recording Sheet	1	yes	no	no	no
Center	Roll and Add Stage 2 Recording Sheet	1	yes	no	no	no
Center	Number Mat 1-9	2	no	no	no	no
Center	Math Fingers Cards	2	no	yes	no	no
Center	Math Fingers Cards	2	no	yes	no	no
Center	Math Fingers Stage 3 Recording Sheet	1	yes	no	no	no
Center	What's Behind My Back Stage 2 Recording Sheet Grade 1	1	yes	no	no	no

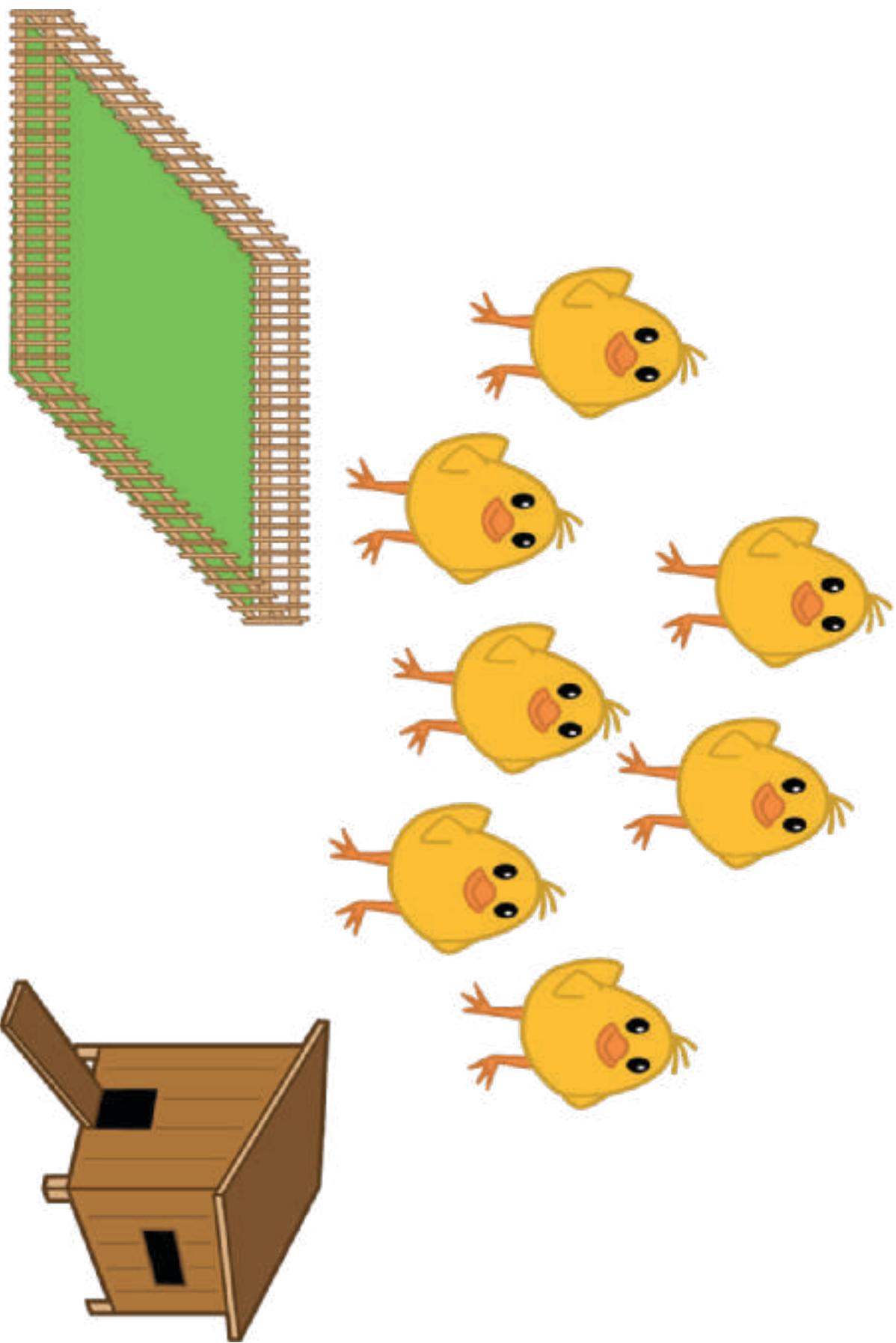


Picture A

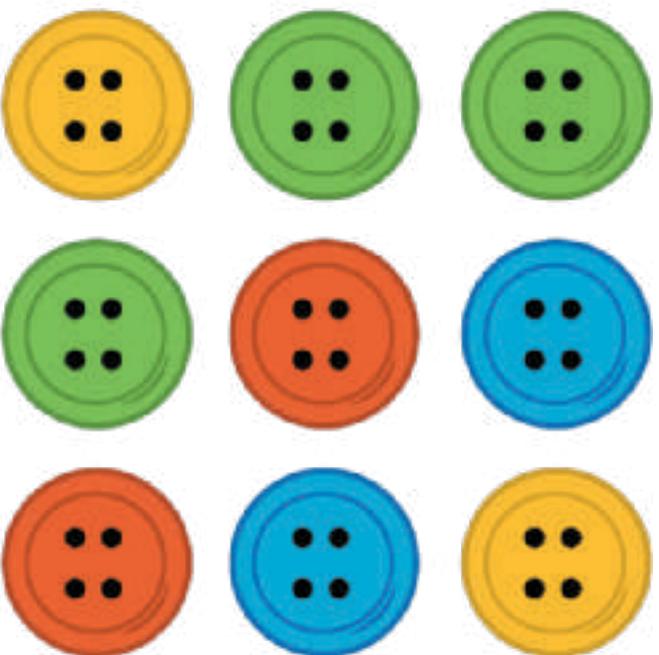


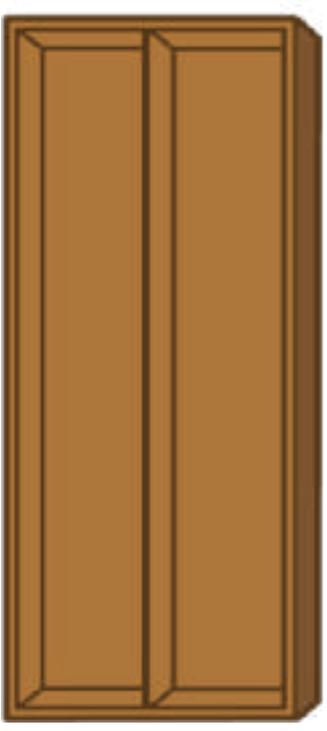
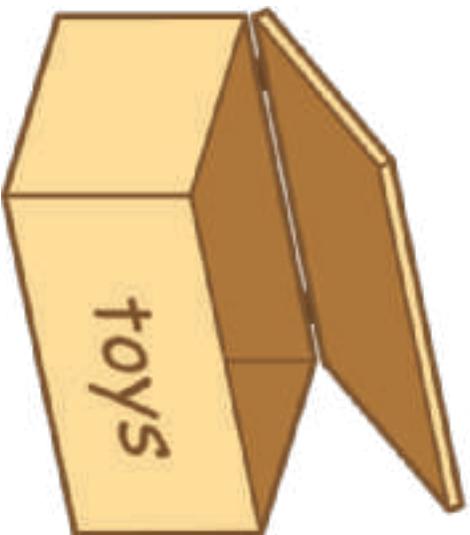
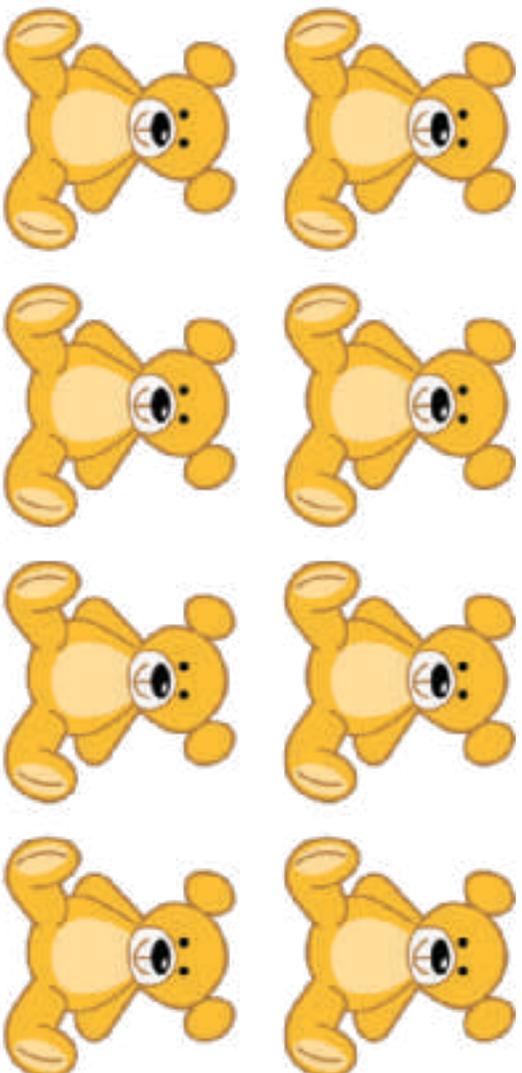


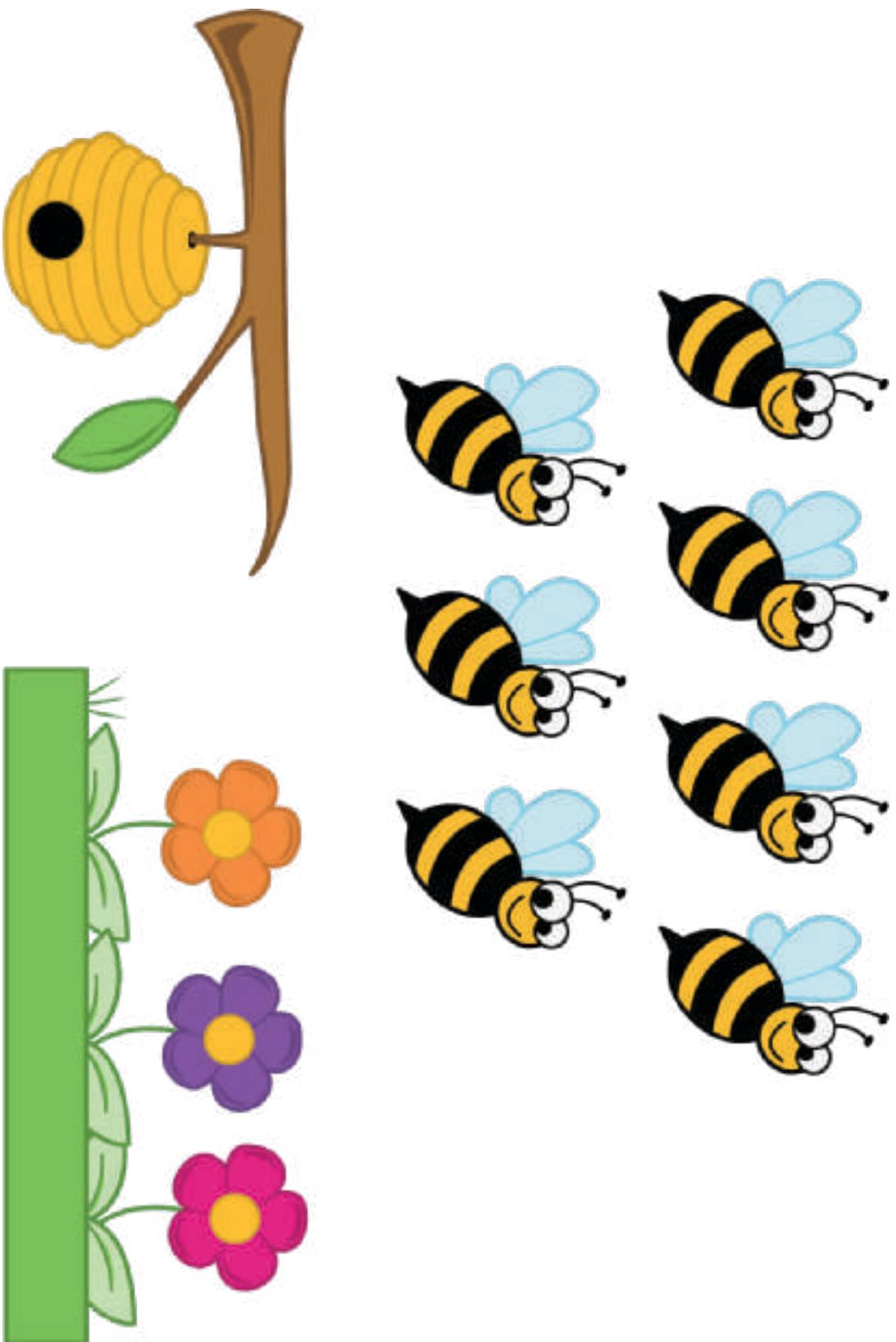
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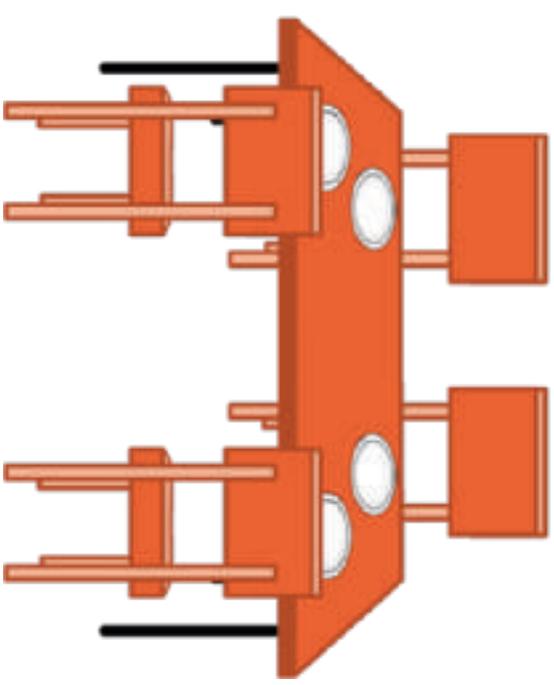
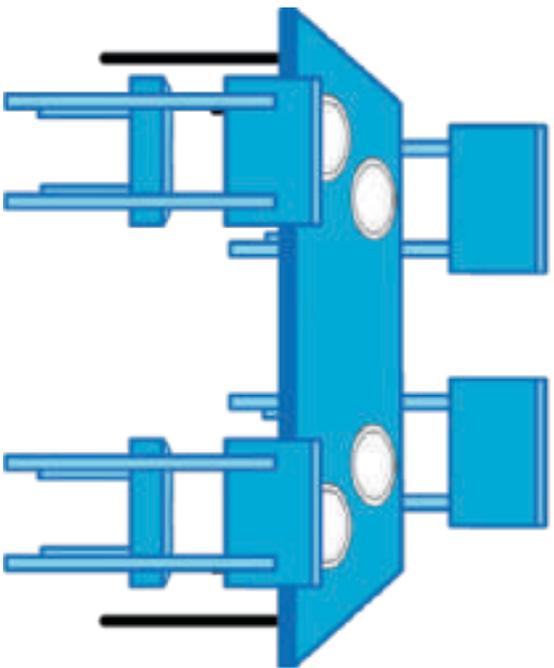
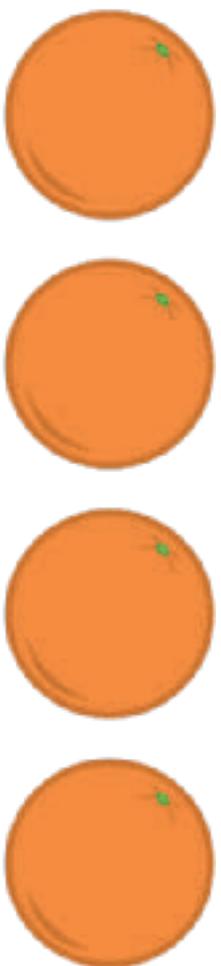


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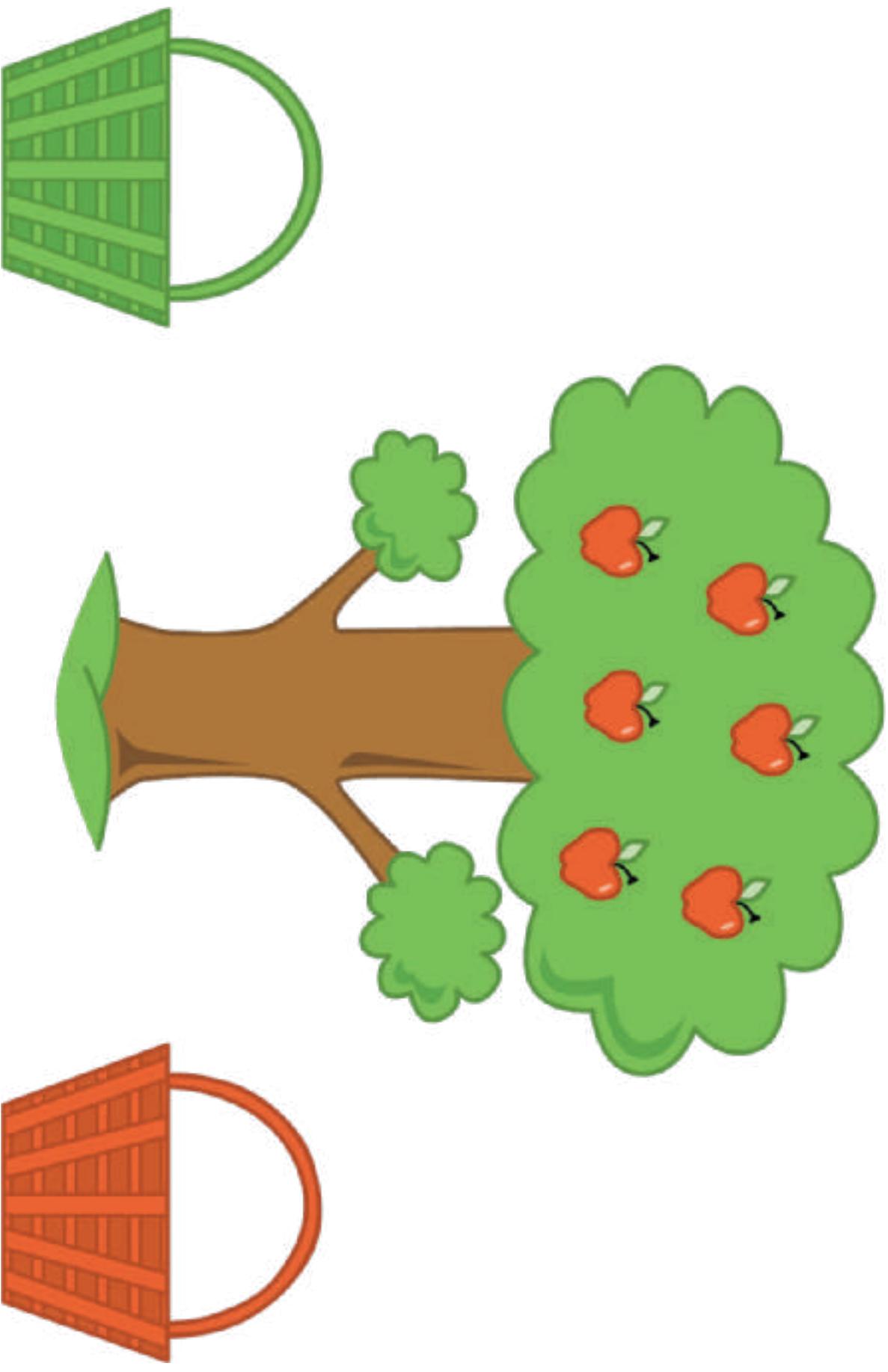




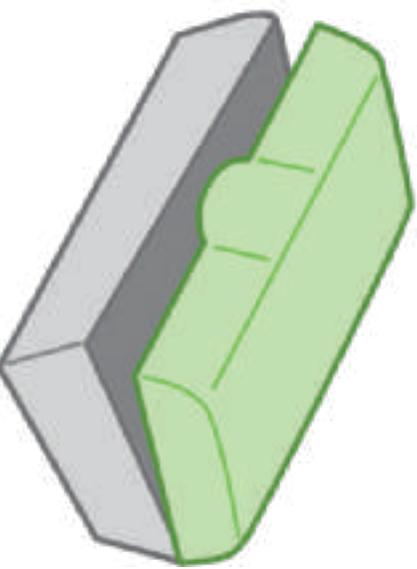
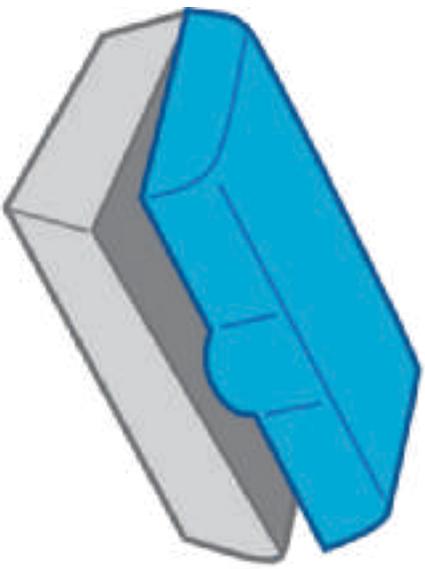




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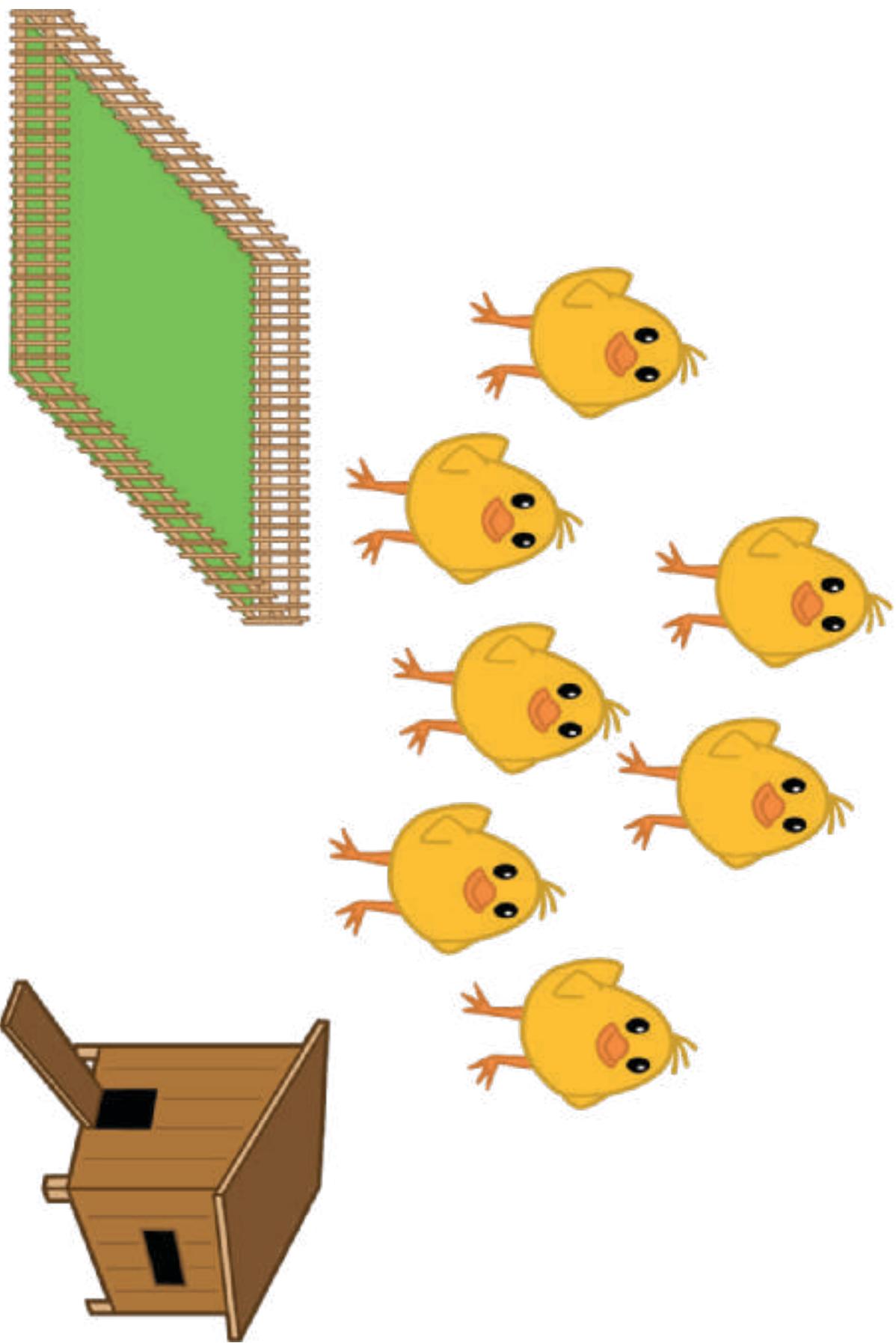


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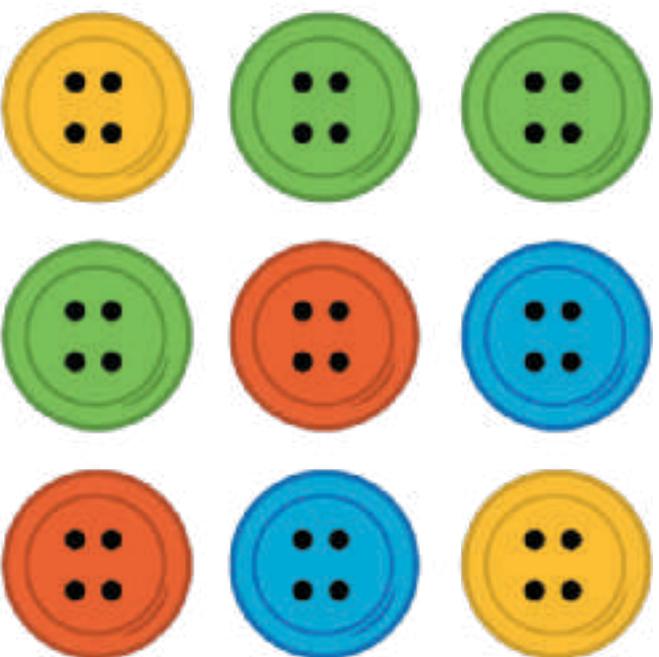
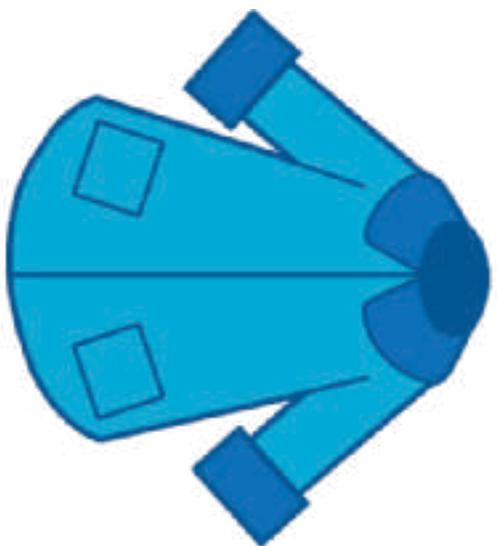


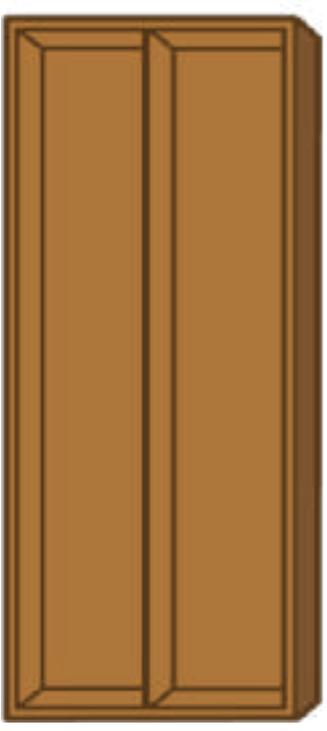
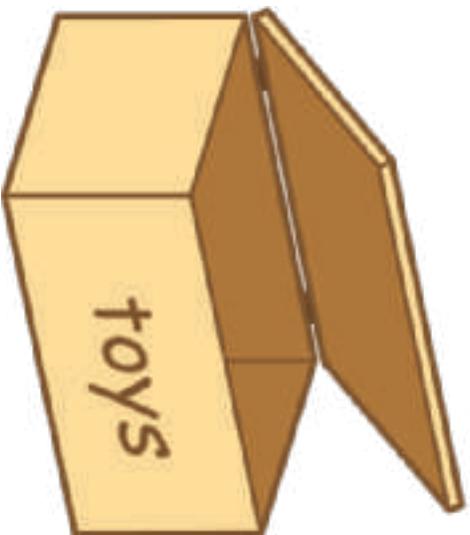
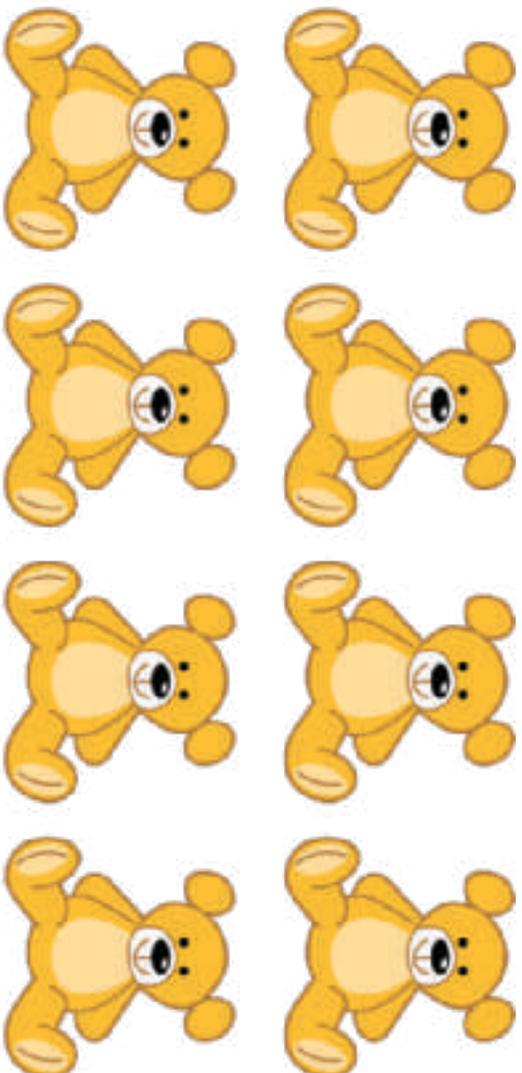


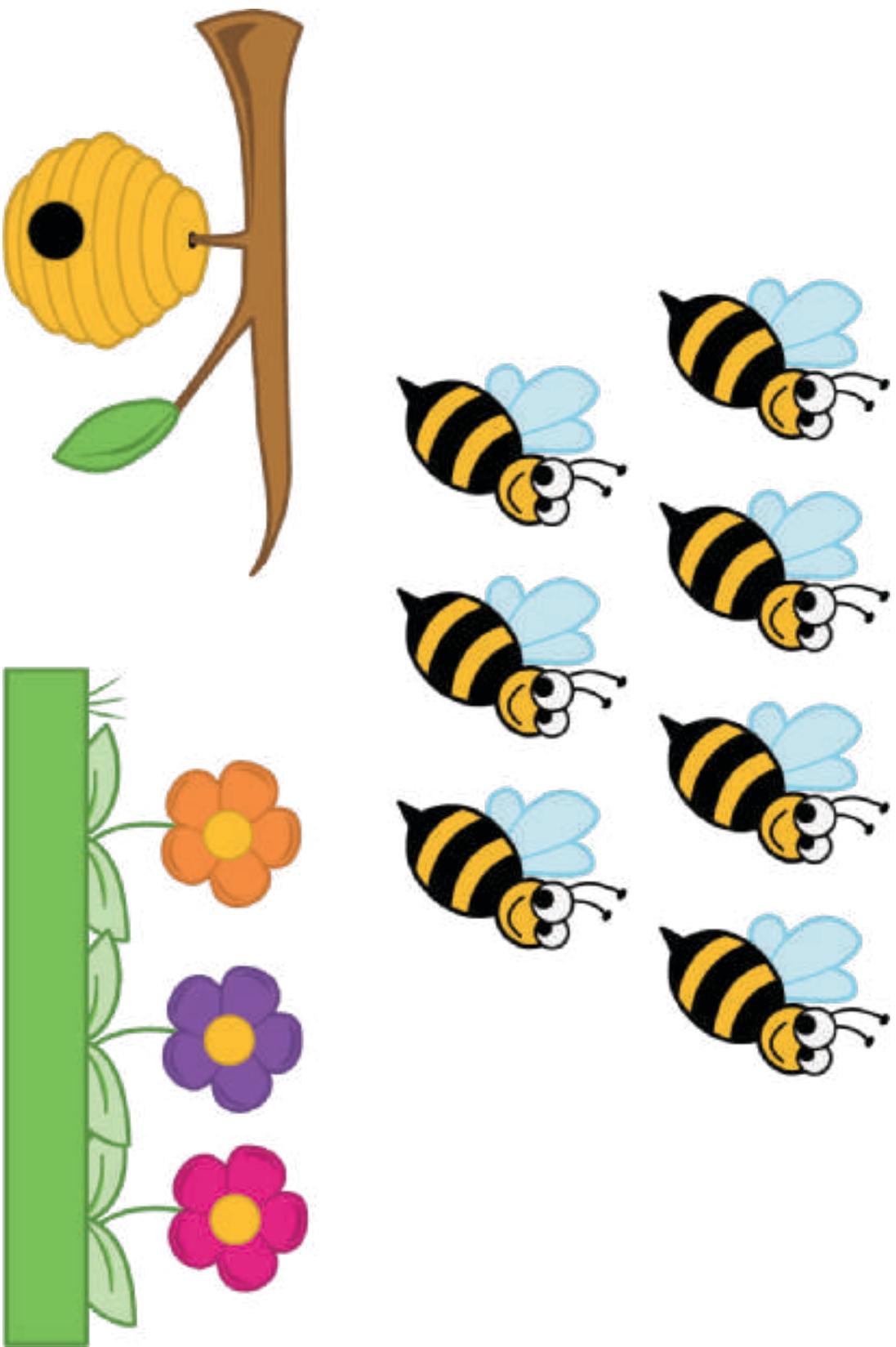
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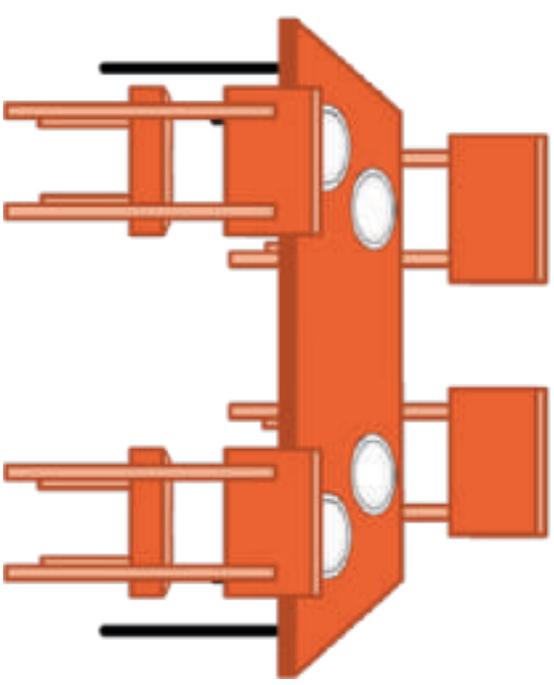
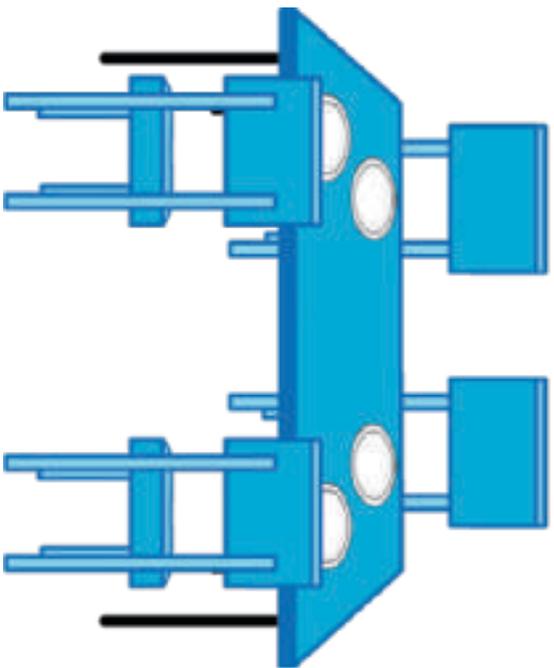
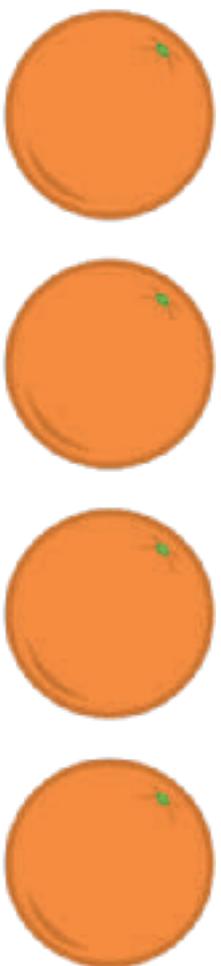


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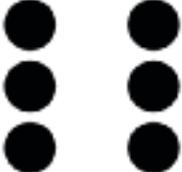
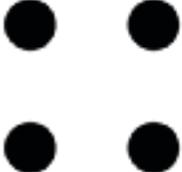
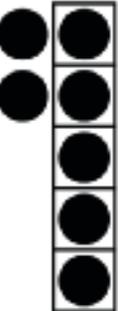
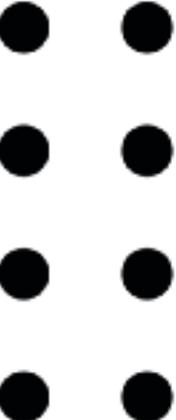


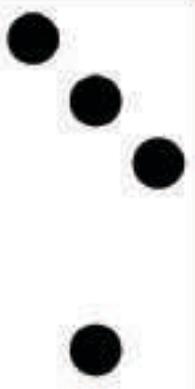
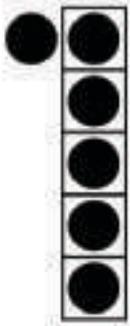
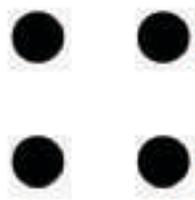
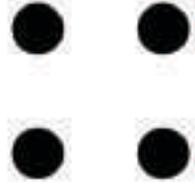
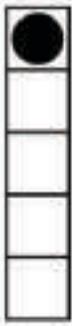
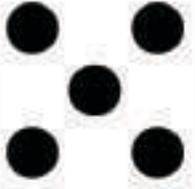
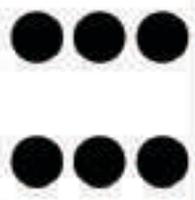
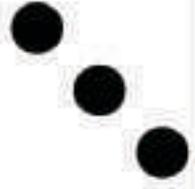


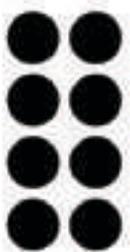
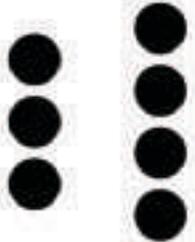
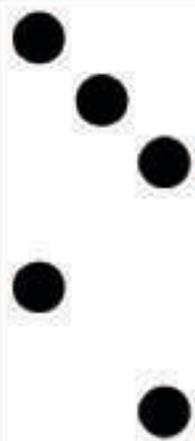
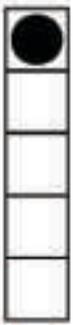
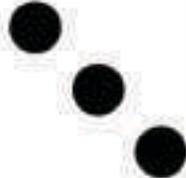
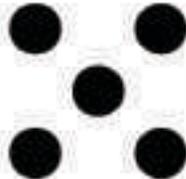
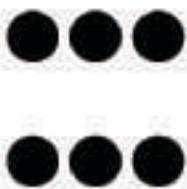
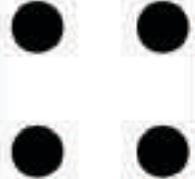
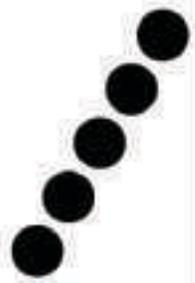


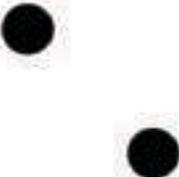
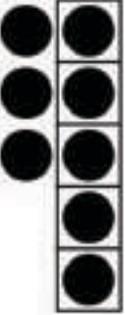
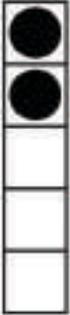
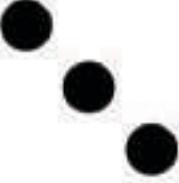
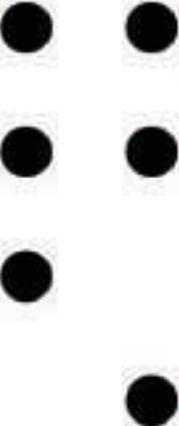
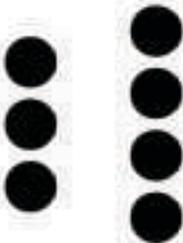
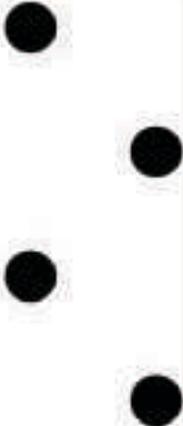
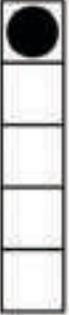
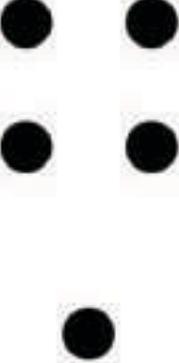
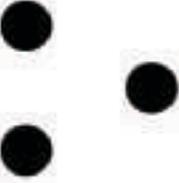
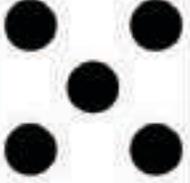
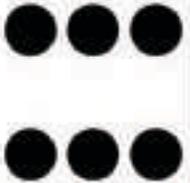
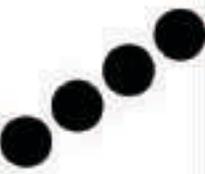


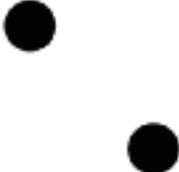
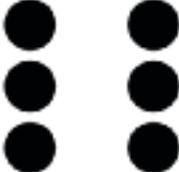
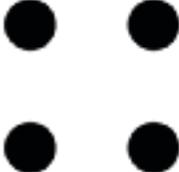
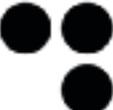
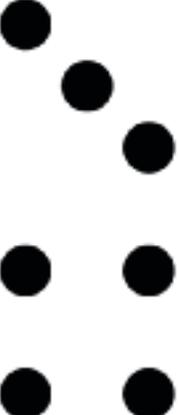
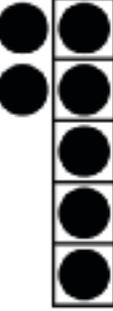
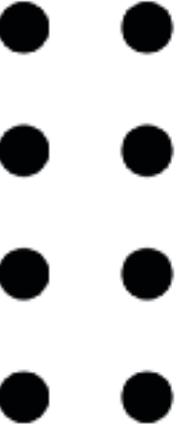
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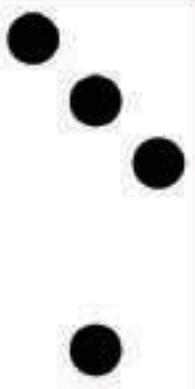
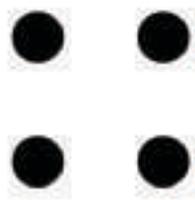
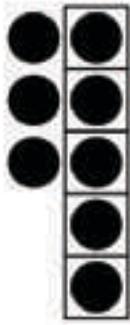
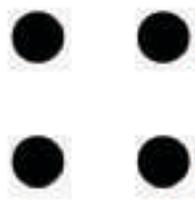
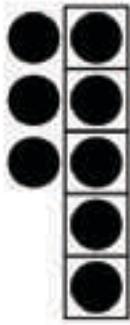
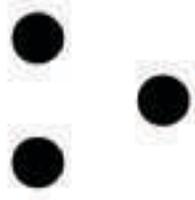
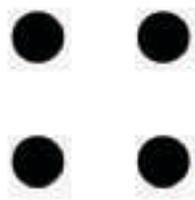
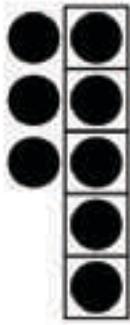
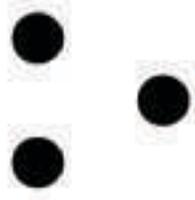
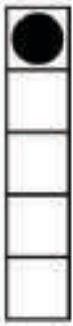
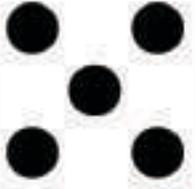
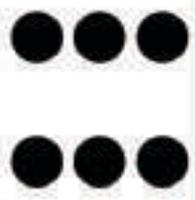
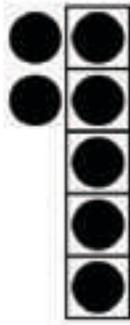
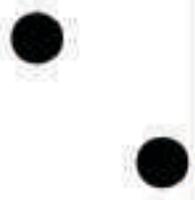
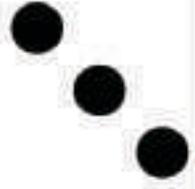
			
			
			
			
			

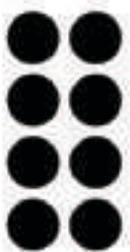
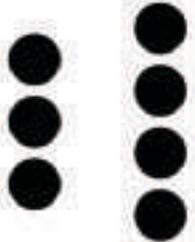
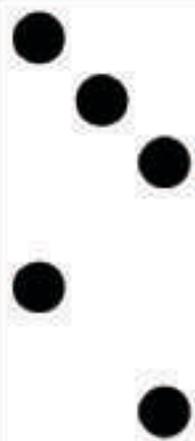
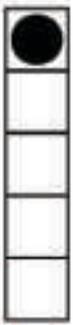
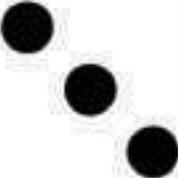
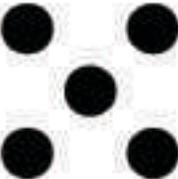
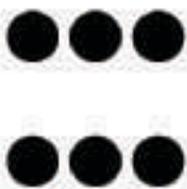
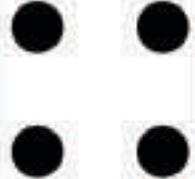
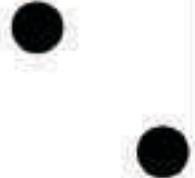
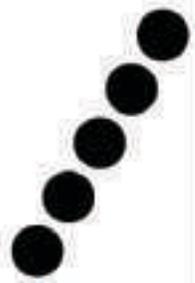
			
			
			
			

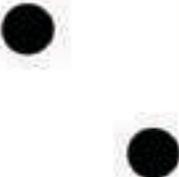
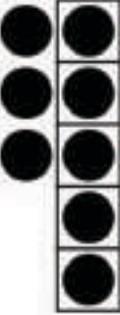
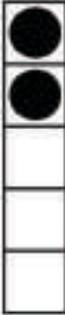
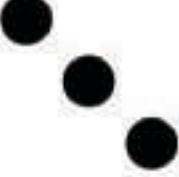
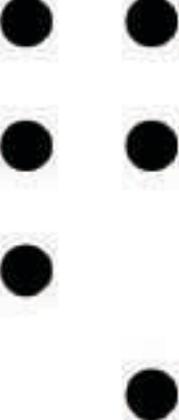
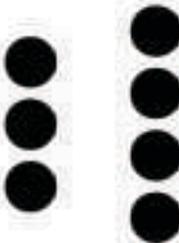
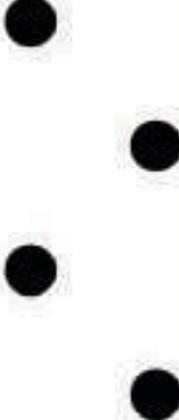
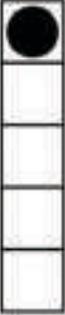
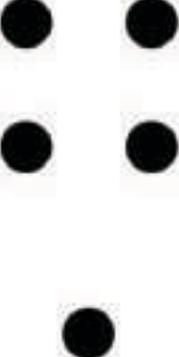
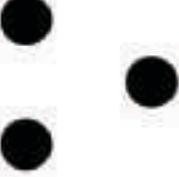
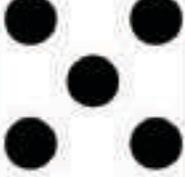
			
			
			
			
			

Check It Off Stage 1 Recording Sheet Kindergarten

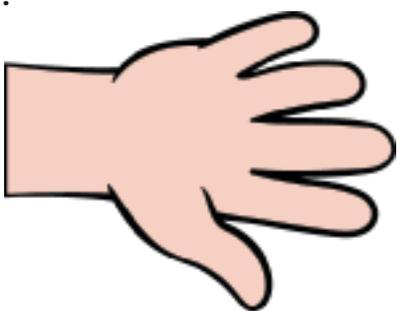
Directions:

- Partner A:
 - Pick 2 cards and find the total.
 - Check off the number you found and write the expression.
- Take turns. The partner who has checked off the most numbers at the end of the game wins.

	✓ Found it!	expression
0		_____ + _____
1		_____ + _____
2		_____ + _____
3		_____ + _____
4		_____ + _____
5		_____ + _____
6		_____ + _____
7		_____ + _____
8		_____ + _____
9		_____ + _____
10		_____ + _____

4	1	9
6	7	3
8	5	2

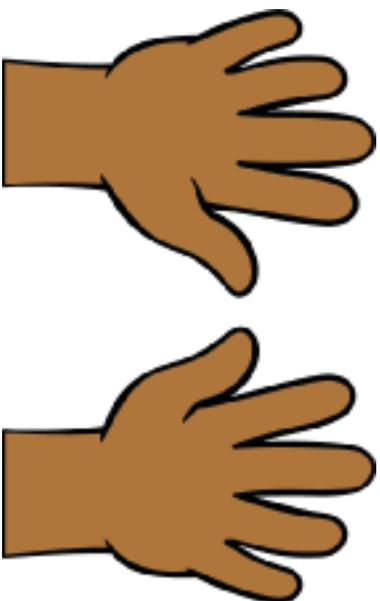
1.



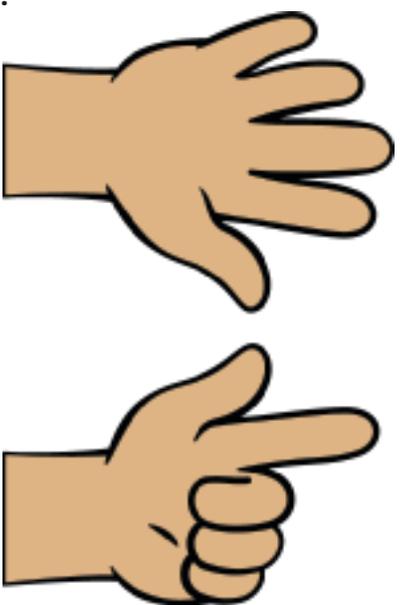
2.



3.



4.



5.



6.



4

6

9

10

7

8

5

$$10 = \underline{\quad} + \underline{\quad}$$

5 cubes



expression: _____



expression: _____



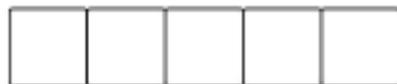
expression: _____



expression: _____



expression: _____



expression: _____

6 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

6 cubes



expression: _____



expression: _____

7 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

7 cubes



expression: _____



expression: _____



expression: _____

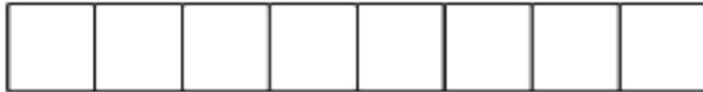
8 cubes



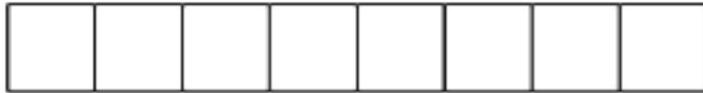
expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

8 cubes



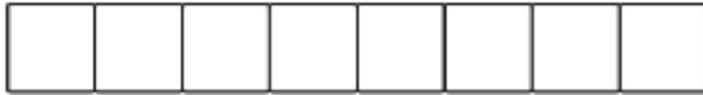
expression: _____



expression: _____



expression: _____



expression: _____

9 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

9 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

10 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

10 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

5 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

6 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

6 cubes



expression: _____



expression: _____

7 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

7 cubes



expression: _____



expression: _____



expression: _____

8 cubes



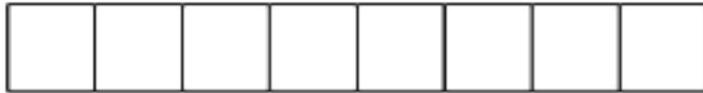
expression: _____



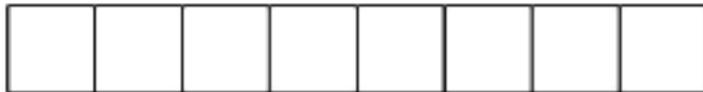
expression: _____



expression: _____



expression: _____

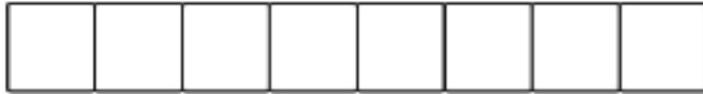


expression: _____

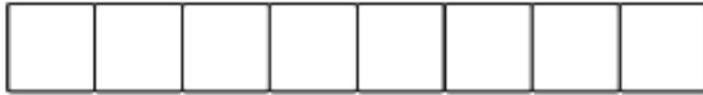
8 cubes



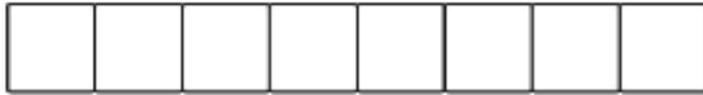
expression: _____



expression: _____



expression: _____



expression: _____

9 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

9 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

10 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

10 cubes



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____



expression: _____

4	6	9
7	8	5

4	6	9
7	8	5

Math Stories Stage 3 Recording Sheet

Tell a story.

Use objects or drawings to show what happens in the story.

Tell a different story.

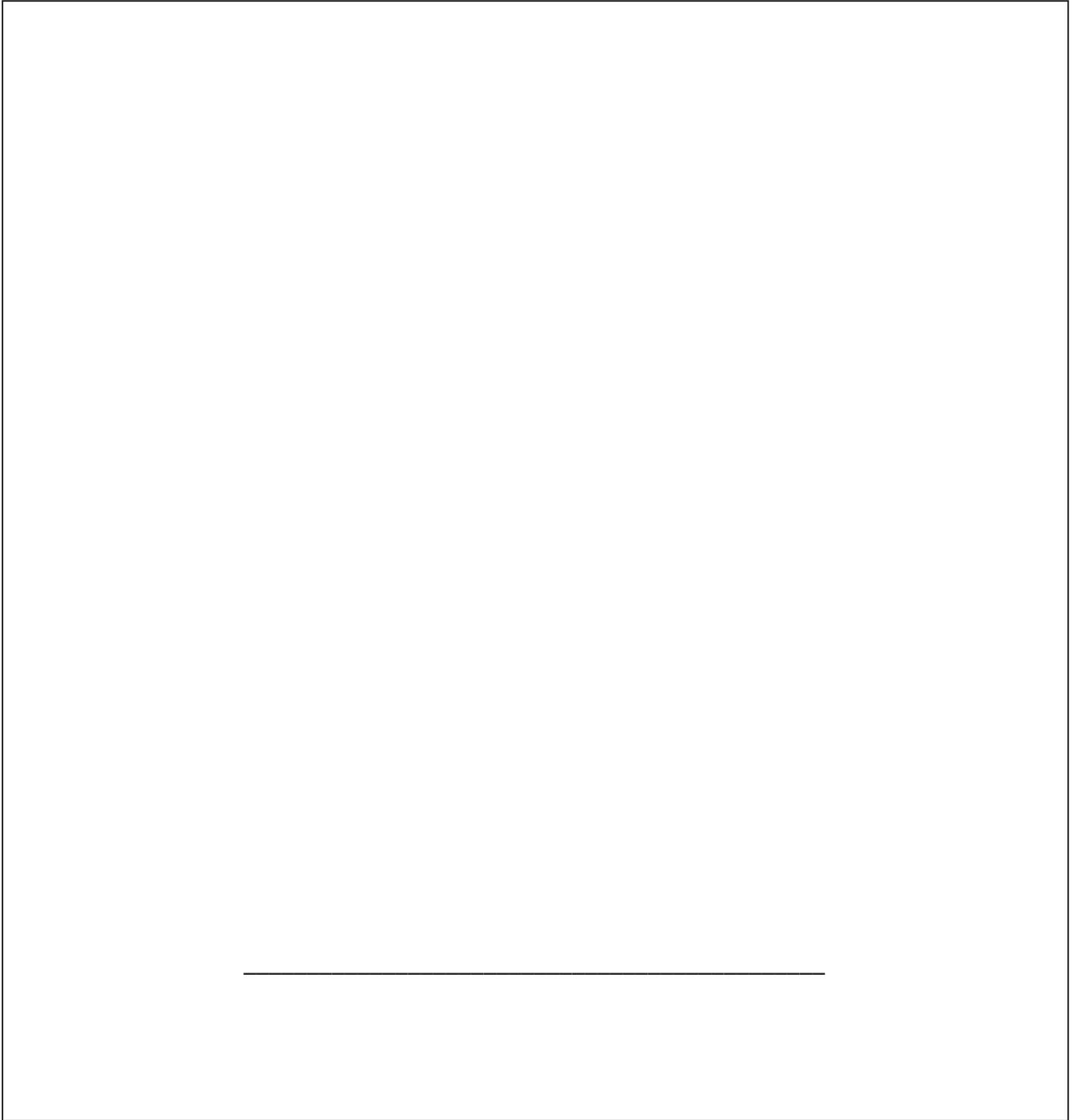
A large empty rectangular box with a thin black border, intended for students to draw or write. A single horizontal line is drawn near the bottom center of the box.

Math Stories Stage 3 Recording Sheet

Tell a story.

Use objects or drawings to show what happens in the story.

Tell a different story.



A large empty rectangular box for drawing or writing, with a horizontal line near the bottom center.



--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

What's Behind My Back Stage 2 Recording Sheet Kindergarten

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$



--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

What's Behind My Back Stage 2 Recording Sheet Kindergarten

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

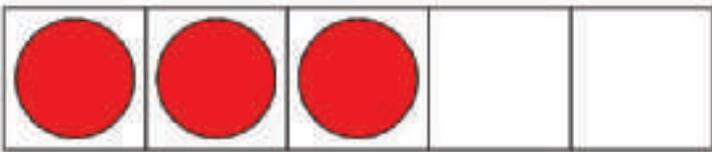
--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

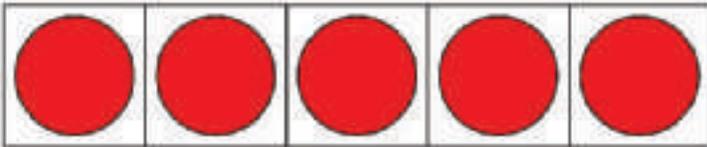
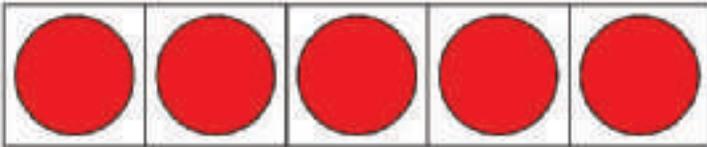
--	--	--	--	--	--	--	--	--	--

$$10 = \underline{\quad} + \underline{\quad}$$

5-Frames to Cut Out



5-Frames to Cut Out



Check It Off Stage 1 Recording Sheet Grade K

Directions:

- On your turn:
 - Pick 2 cards and find the total.
 - Check off the number you found and write the expression.
- Take turns. The partner who has checked off the most numbers at the end of the game wins.

	✓ Found it!	expression
0		_____ + _____
1		_____ + _____
2		_____ + _____
3		_____ + _____
4		_____ + _____
5		_____ + _____
6		_____ + _____
7		_____ + _____
8		_____ + _____
9		_____ + _____
10		_____ + _____

Check It Off Stage 1 Recording Sheet Grade 1

Directions:

- On your turn:
 - Pick 2 cards and find the sum.
 - Check off the number you found and write the expression.
- Take turns. The partner who has checked off the most numbers at the end of the game wins.

	✓ Found it!	expression
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Find the Value of Expressions within 10 Stage 1 Cards

Find the Value of Expressions

$$3 + 5$$

Find the Value of Expressions

$$7 - 5$$

Find the Value of Expressions

$$1 + 6$$

Find the Value of Expressions

$$7 + 2$$

Find the Value of Expressions

$$5 - 2$$

Find the Value of Expressions

$$6 + 0$$

Find the Value of Expressions

$$4 + 4$$

Find the Value of Expressions

$$9 - 4$$

Find the Value of Expressions

$$4 - 0$$

Find the Value of Expressions

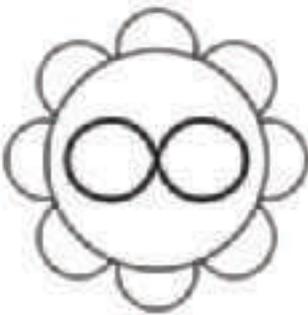
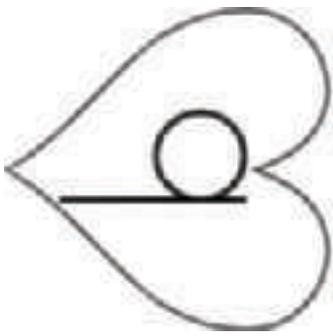
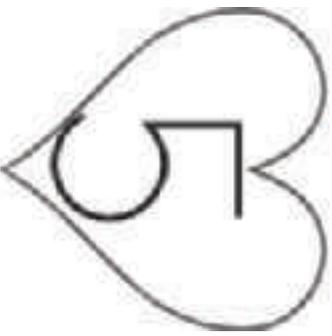
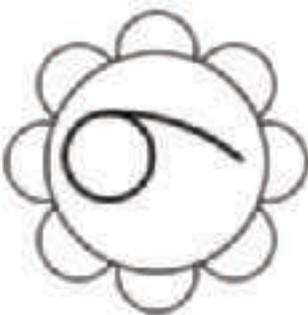
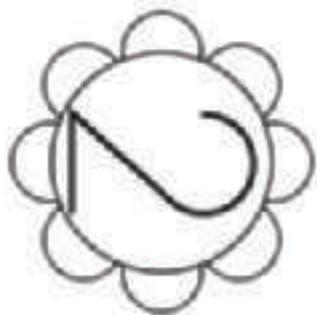
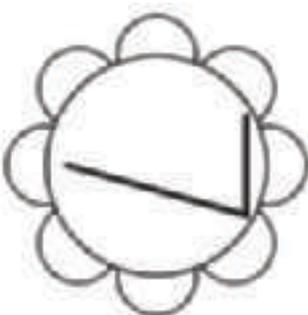
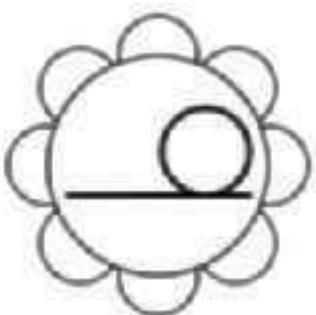
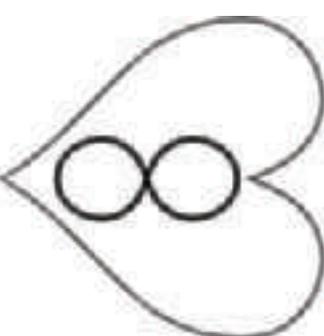
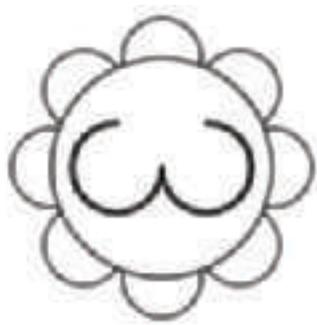
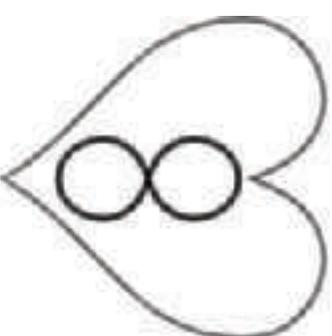
$$10 - 2$$

Find the Value of Expressions

$$8 + 1$$

Find the Value of Expressions

$$8 - 4$$

Shake and Spill Stage 3 Recording Sheet Kindergarten



Draw a picture.

Fill in the expression.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

Draw a picture.

Fill in the expression.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

Draw a picture.

Fill in the expression.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

Draw a picture.

Fill in the expression.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

Draw a picture.

Fill in the expression.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

Draw a picture.

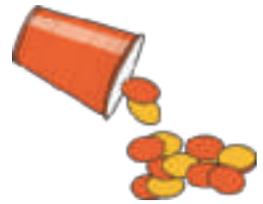
Fill in the expression.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

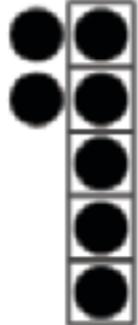
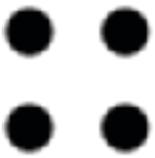
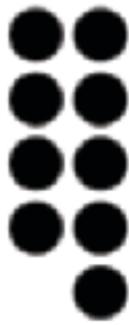
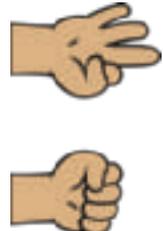
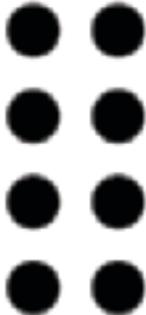
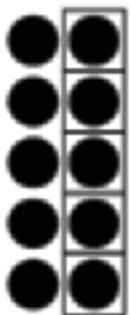
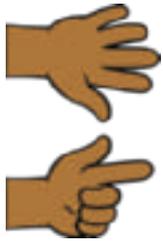
Shake and Spill Stage 3 Recording Sheet Grade 1

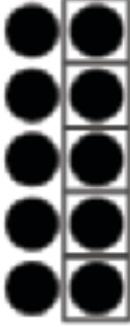
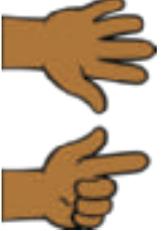
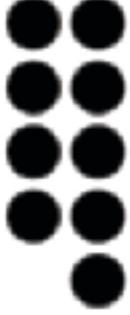
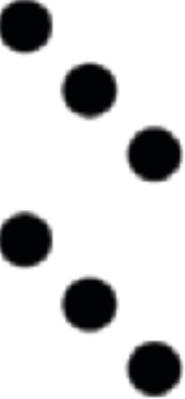
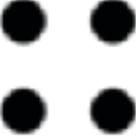
Directions:

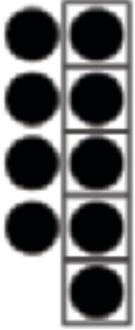
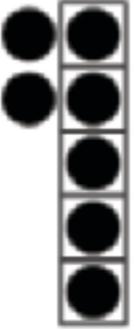
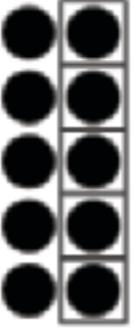
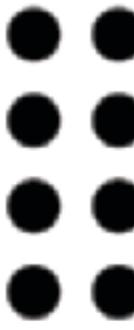
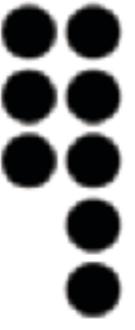
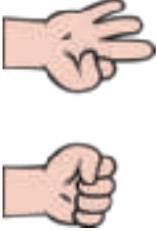
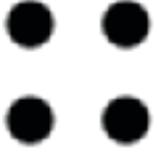
- Choose how many counters to put in the cup.
- Partner A: Shake and spill.
- Both partners: Determine how many red counters and how many yellow counters there are and write an equation to show the total.
- Switch roles and start the next round.

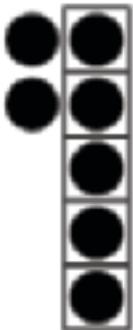
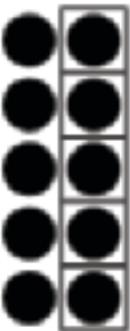
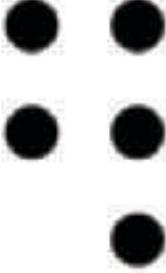
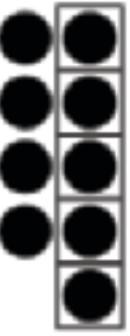


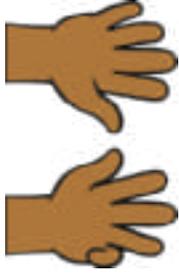
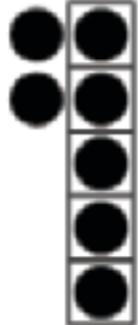
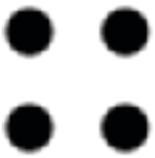
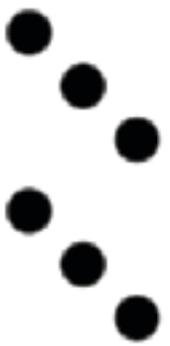
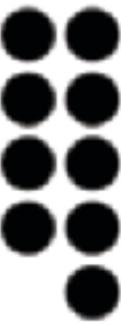
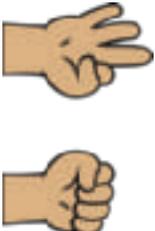
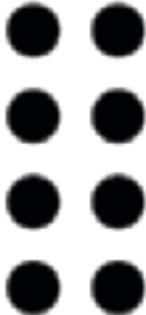
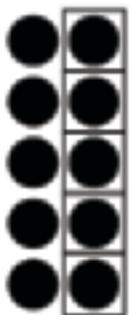
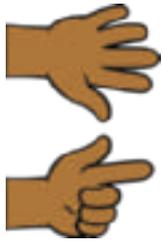
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1	
2	
3	
4	
5	
6	
7	
8	

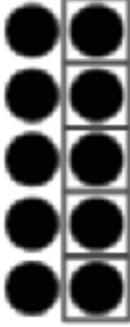
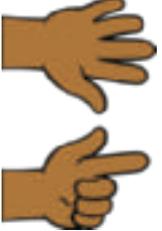
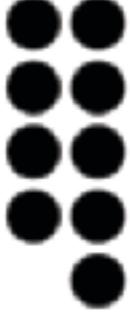
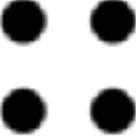
					
					
					

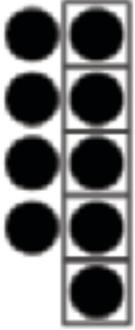
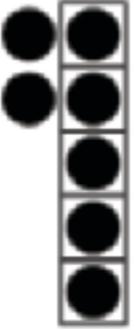
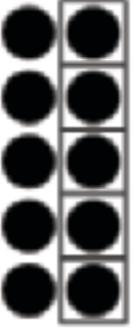
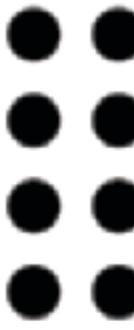
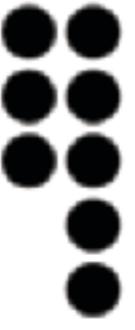
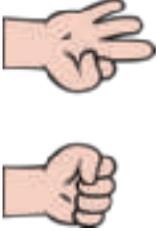
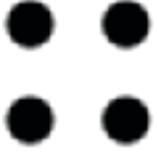
			
			
			
			

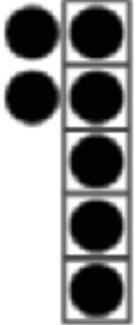
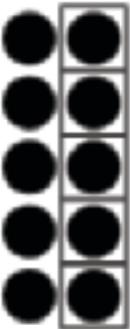
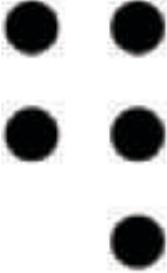
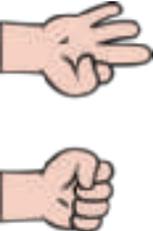
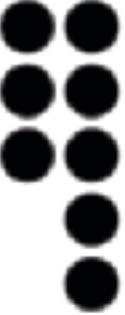
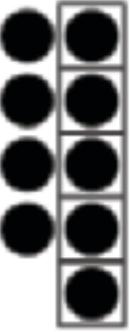
	
	
	
	
	
	
	

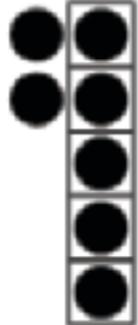
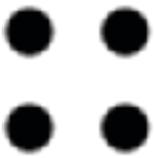
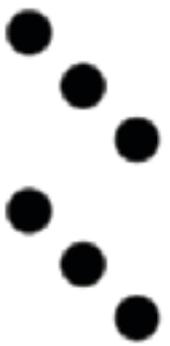
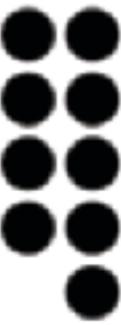
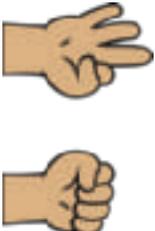
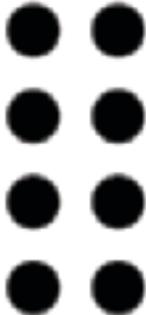
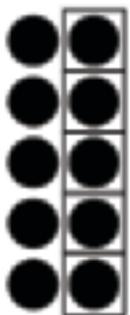
			
			
			

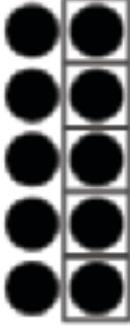
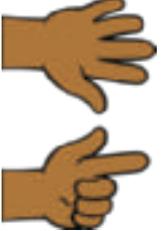
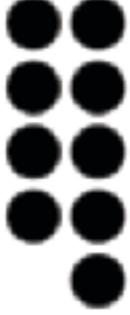
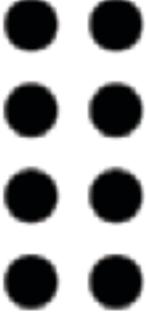
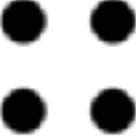
					
					
					

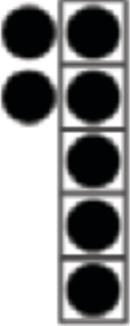
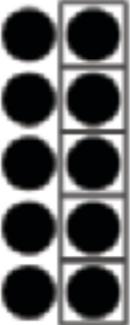
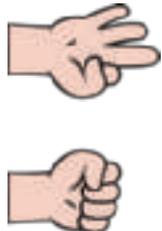
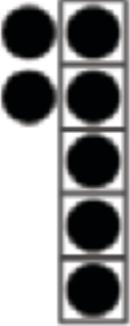
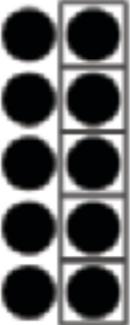
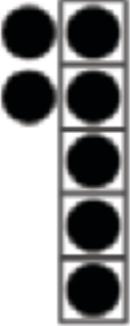
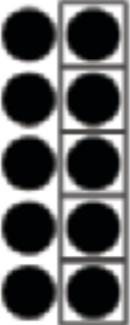
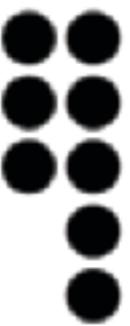
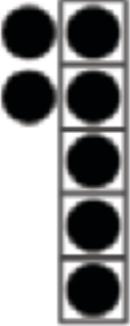
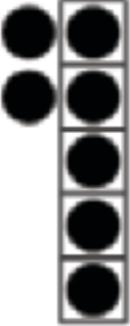
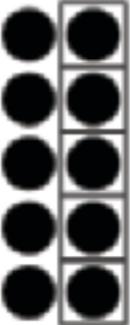
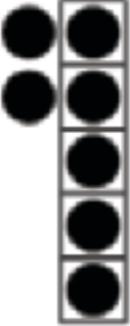
			
			
			
			

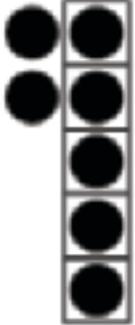
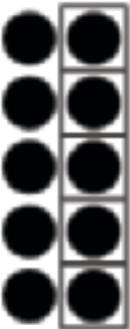
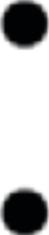
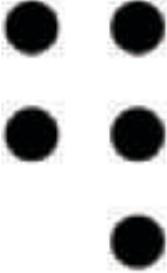
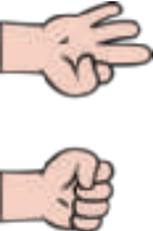
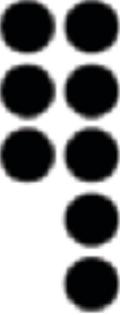
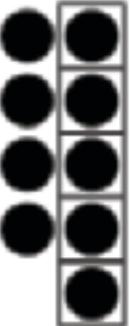
	
	
	
	
	
	
	

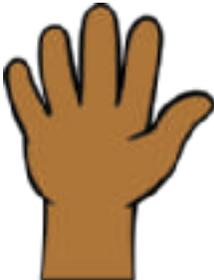
			
			
			
			

Bingo Stage 1 Cards

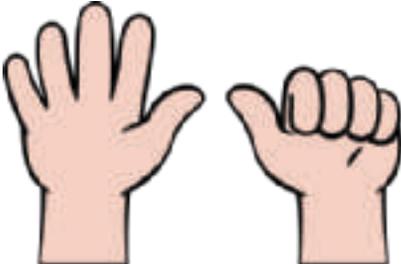
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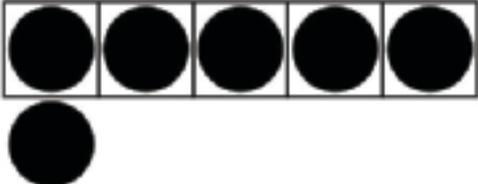
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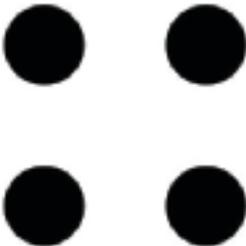
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Bingo Image Card



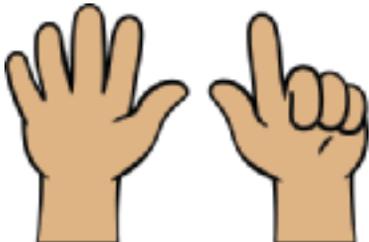
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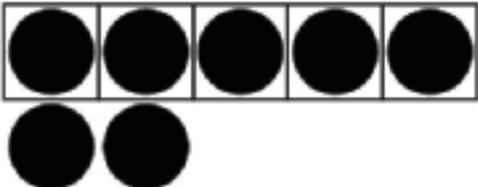
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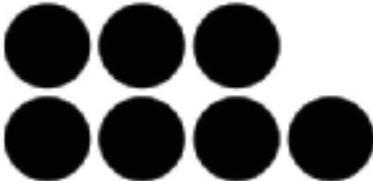


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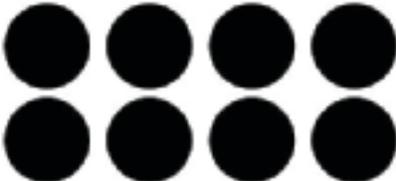


Bingo Stage 1 Cards

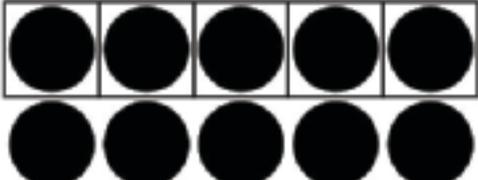
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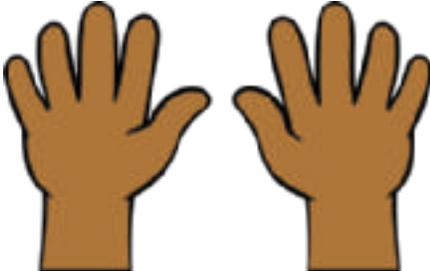
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Bingo Image Card



Bingo Image Card



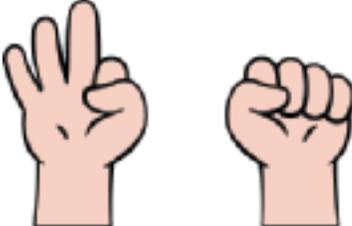
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Bingo Image Card



Bingo Image Card

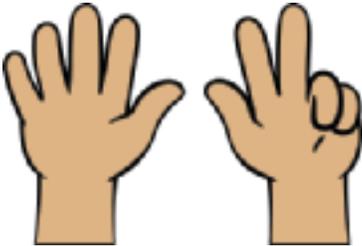


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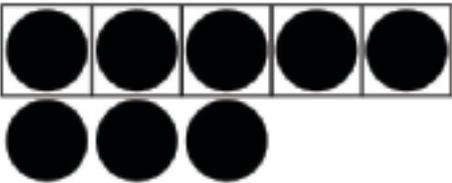


Bingo Stage 1 Cards

Bingo Image Card



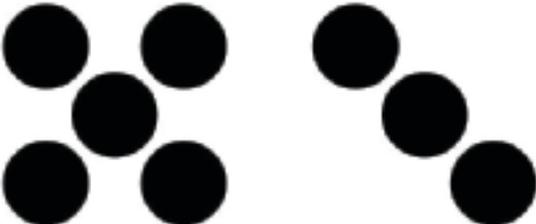
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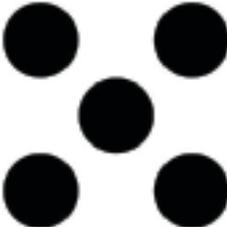
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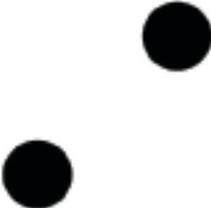
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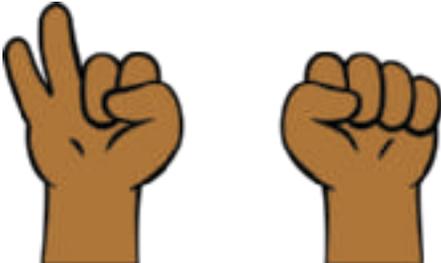
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Bingo Image Card



Bingo Image Card

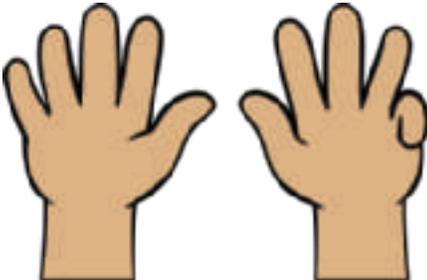


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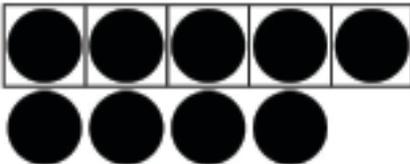


Bingo Stage 1 Cards

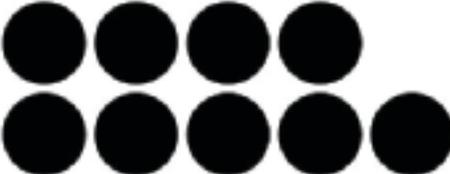
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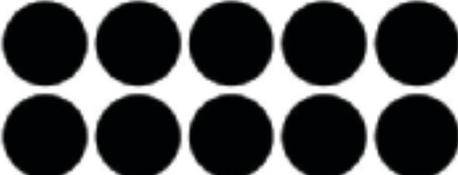
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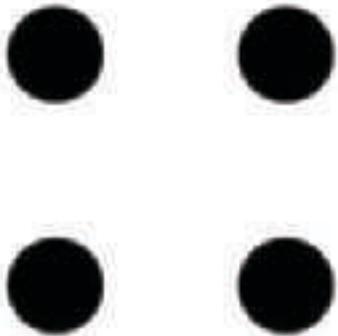
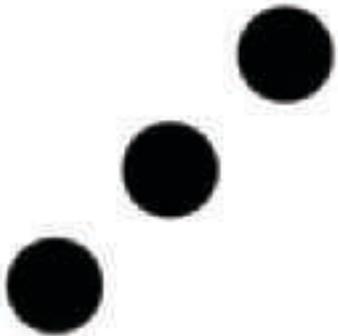
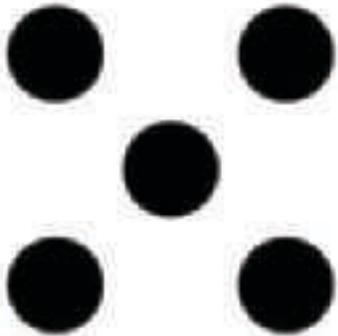
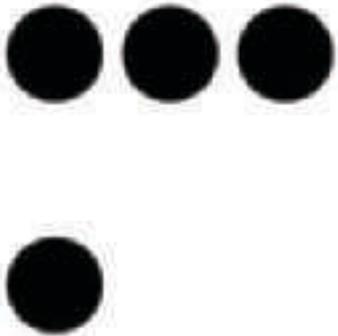
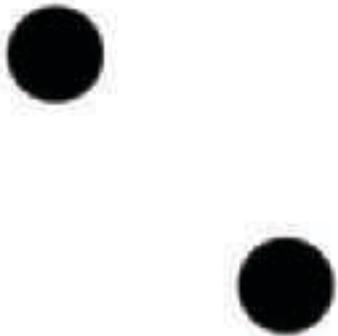
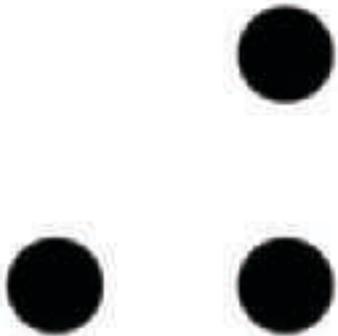
Bingo Image Card



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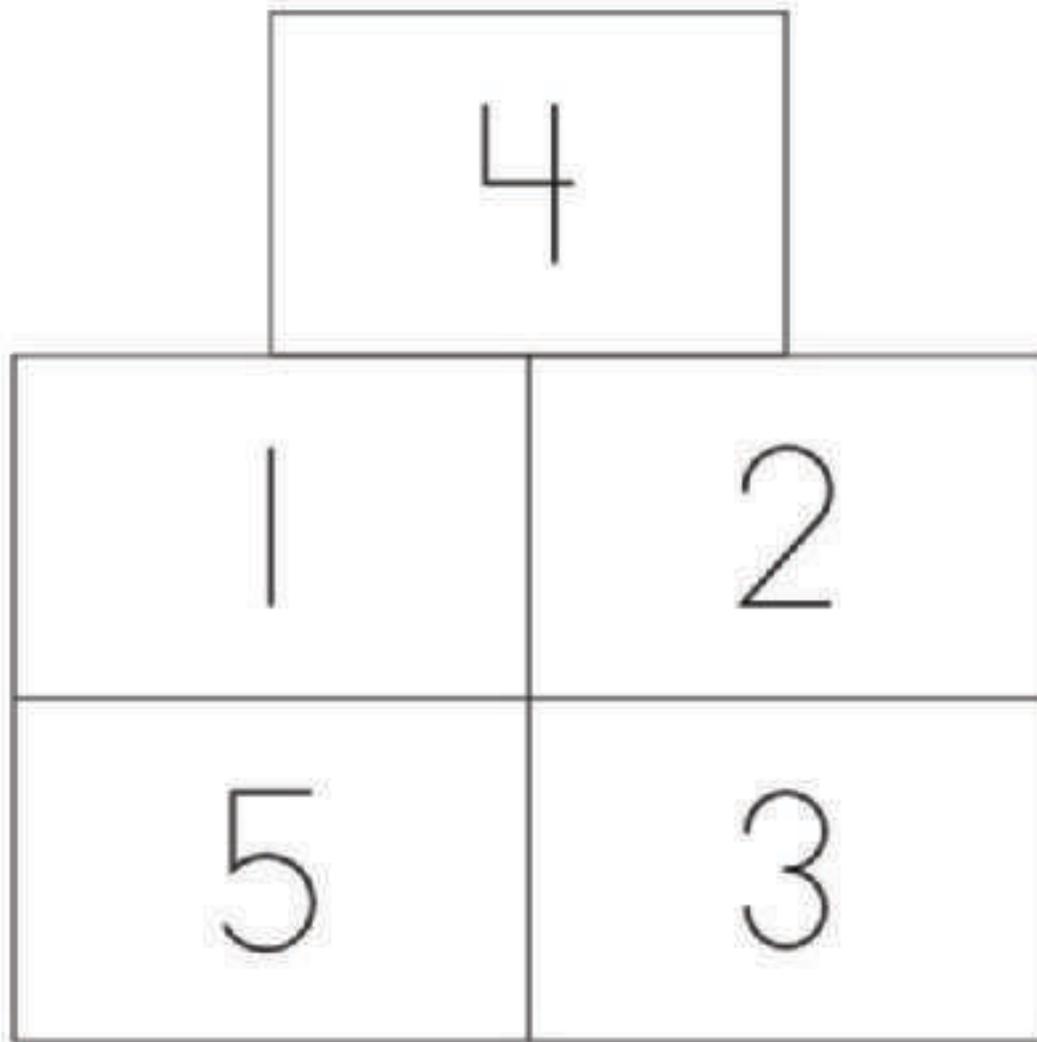


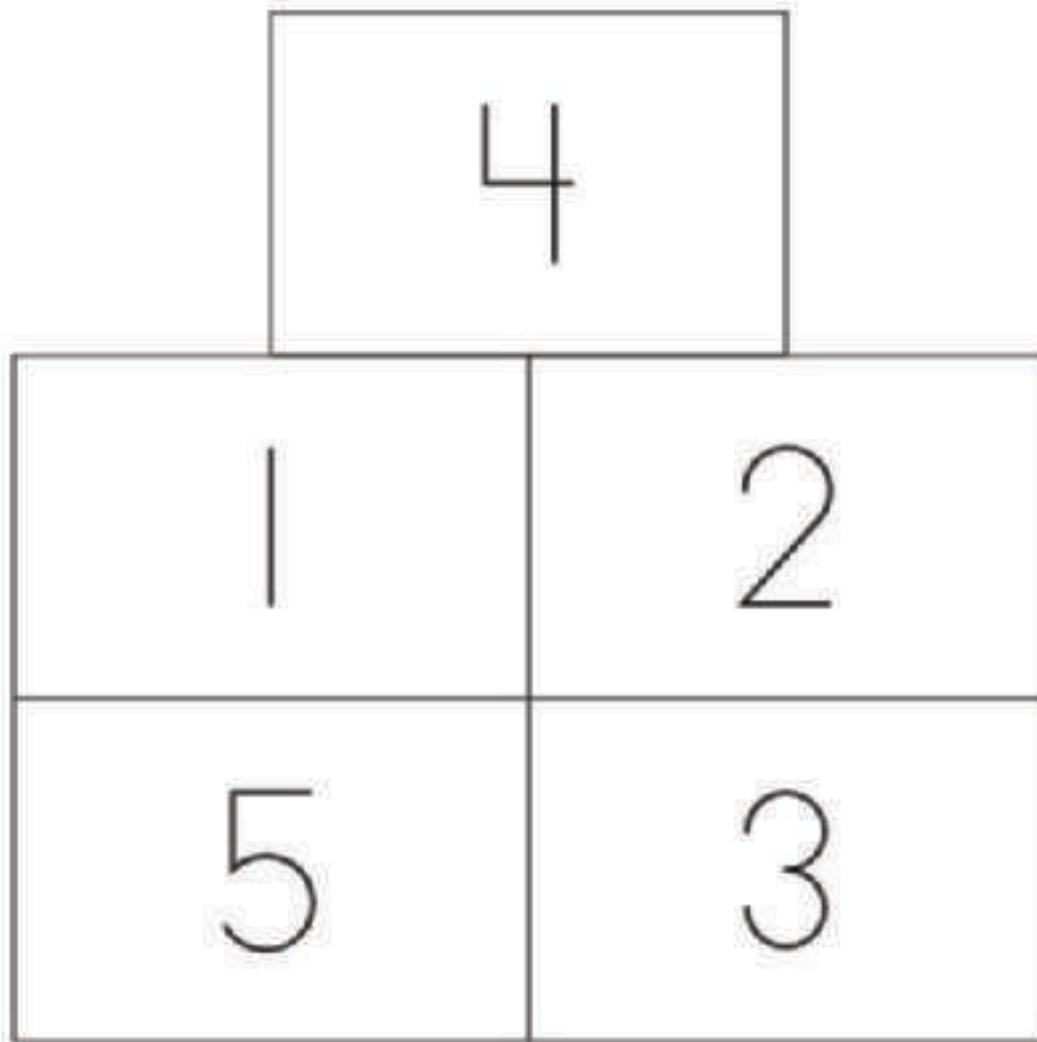
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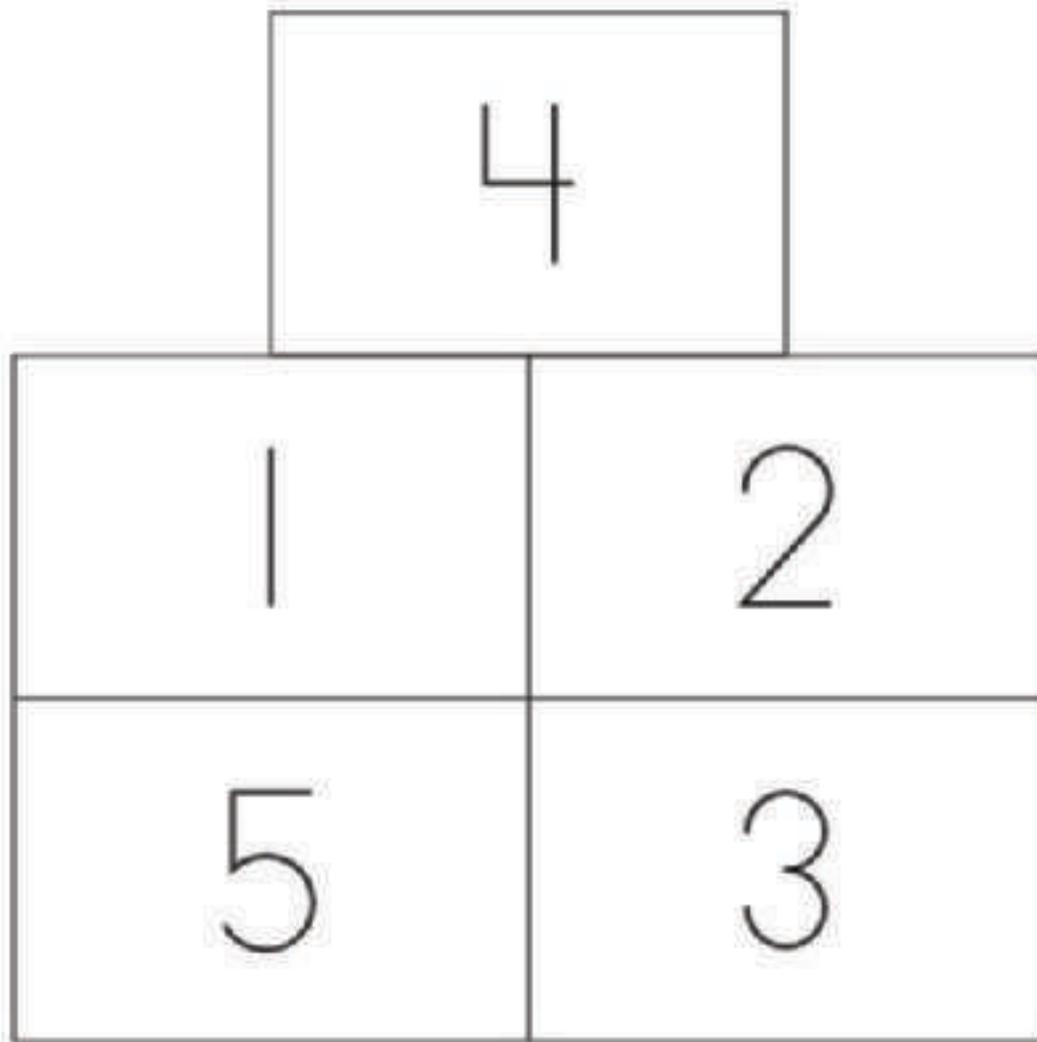
		
		
		

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5-frames Stages 1 and 2 Recording Sheet

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1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

5-frames Stages 1 and 2 Recording Sheet

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1. _____

2. _____

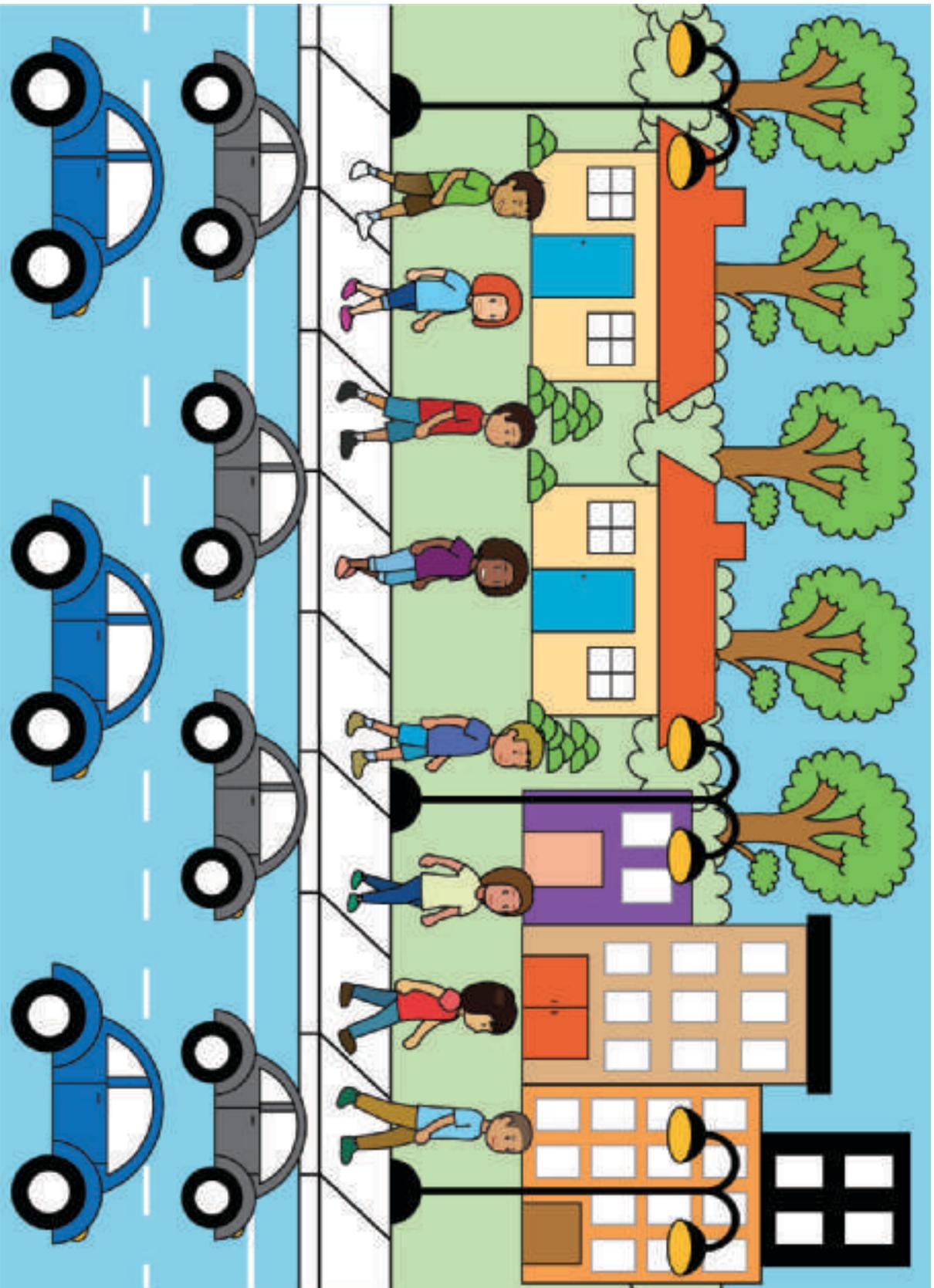
3. _____

4. _____

5. _____

6. _____

Picture A



Picture B



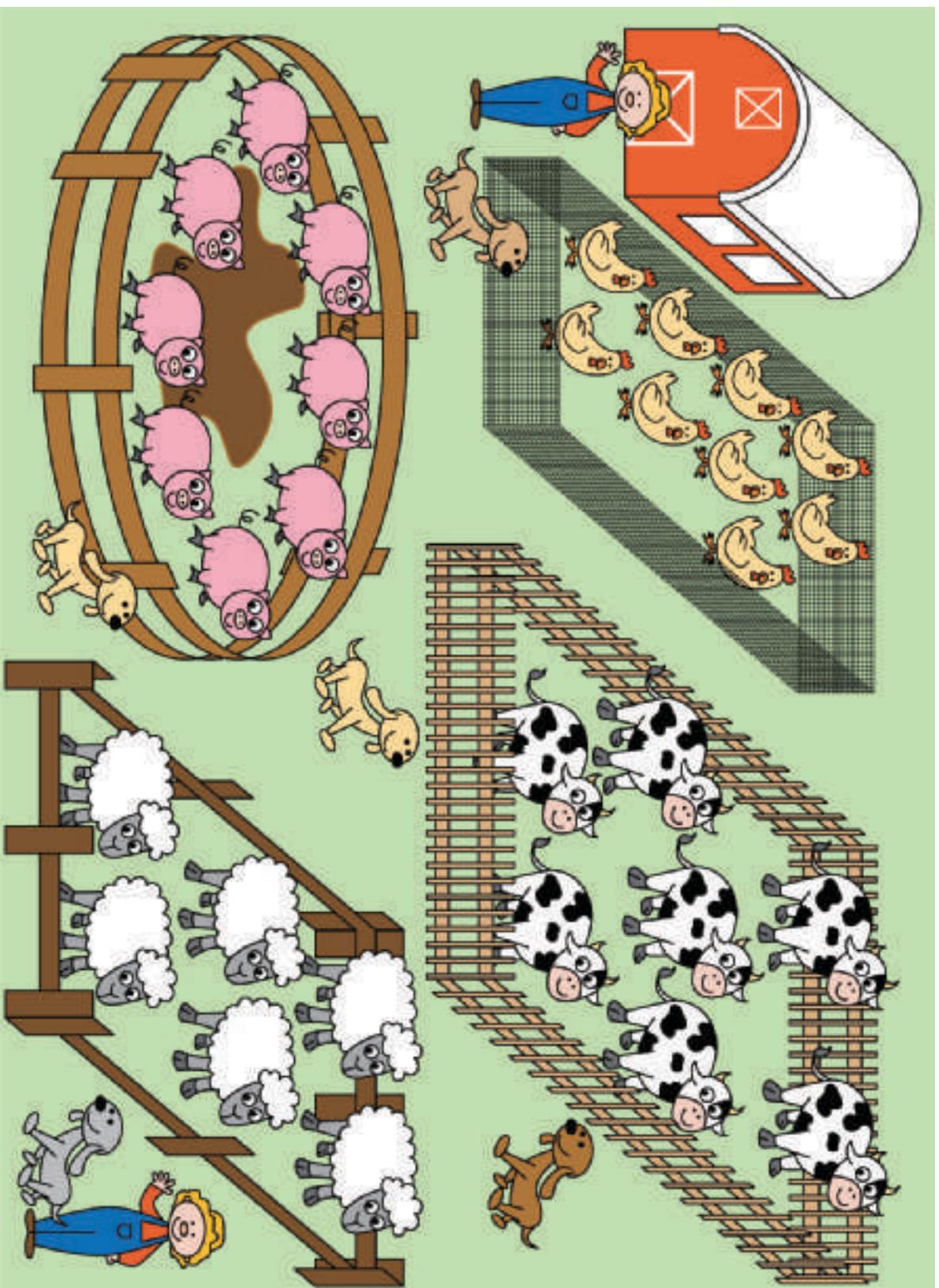
Picture C



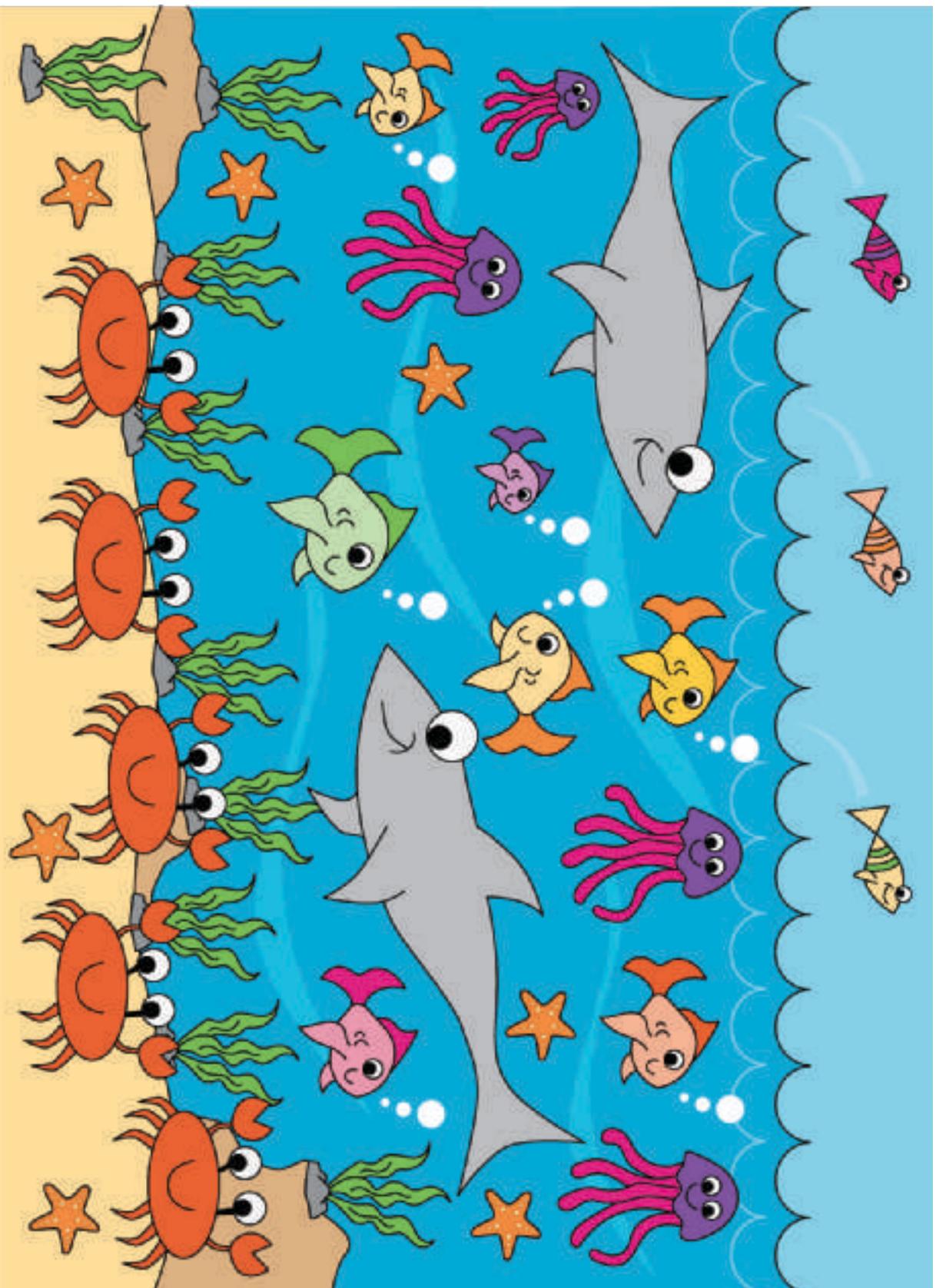
Picture D



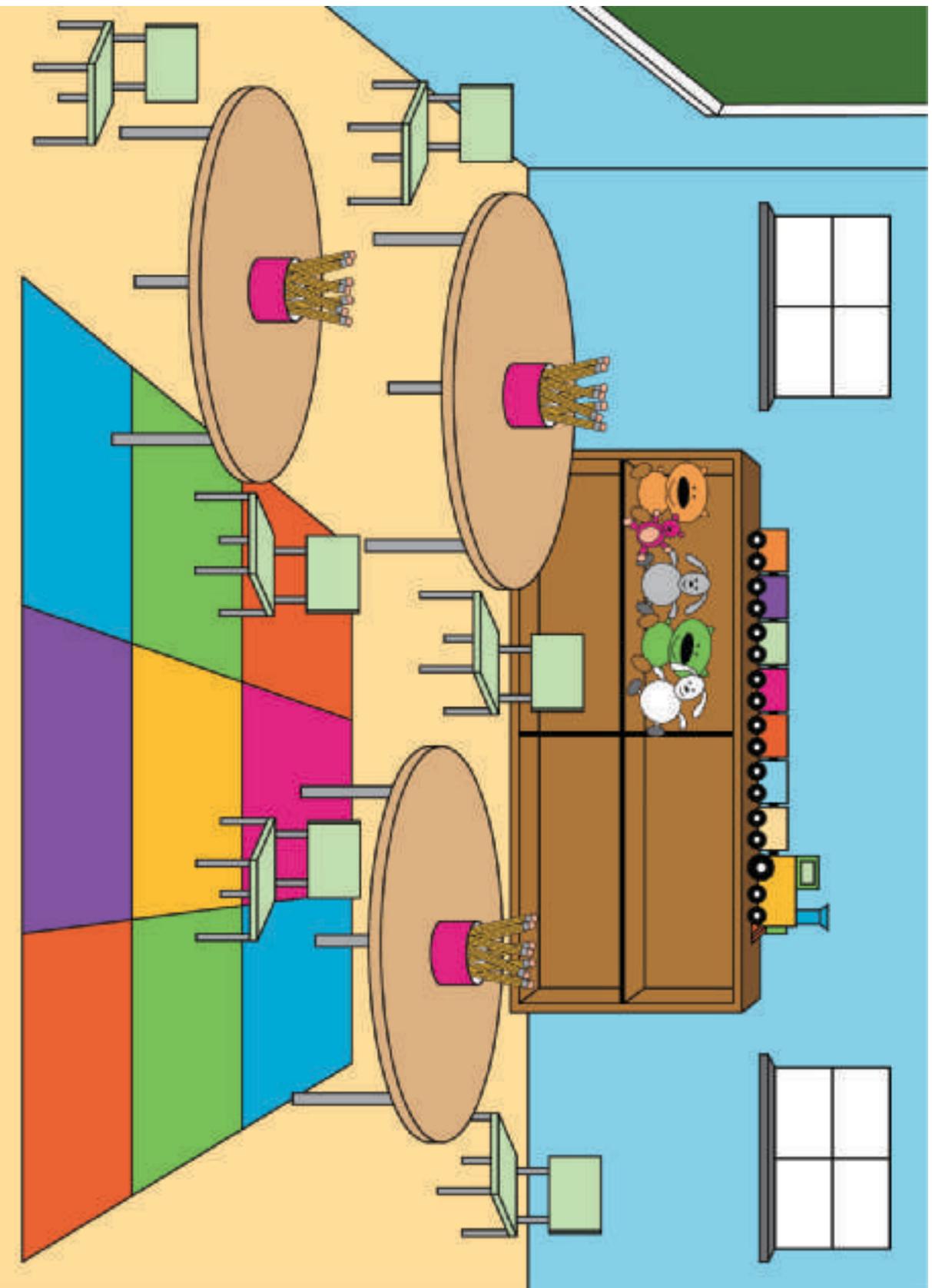
Picture E



Picture F



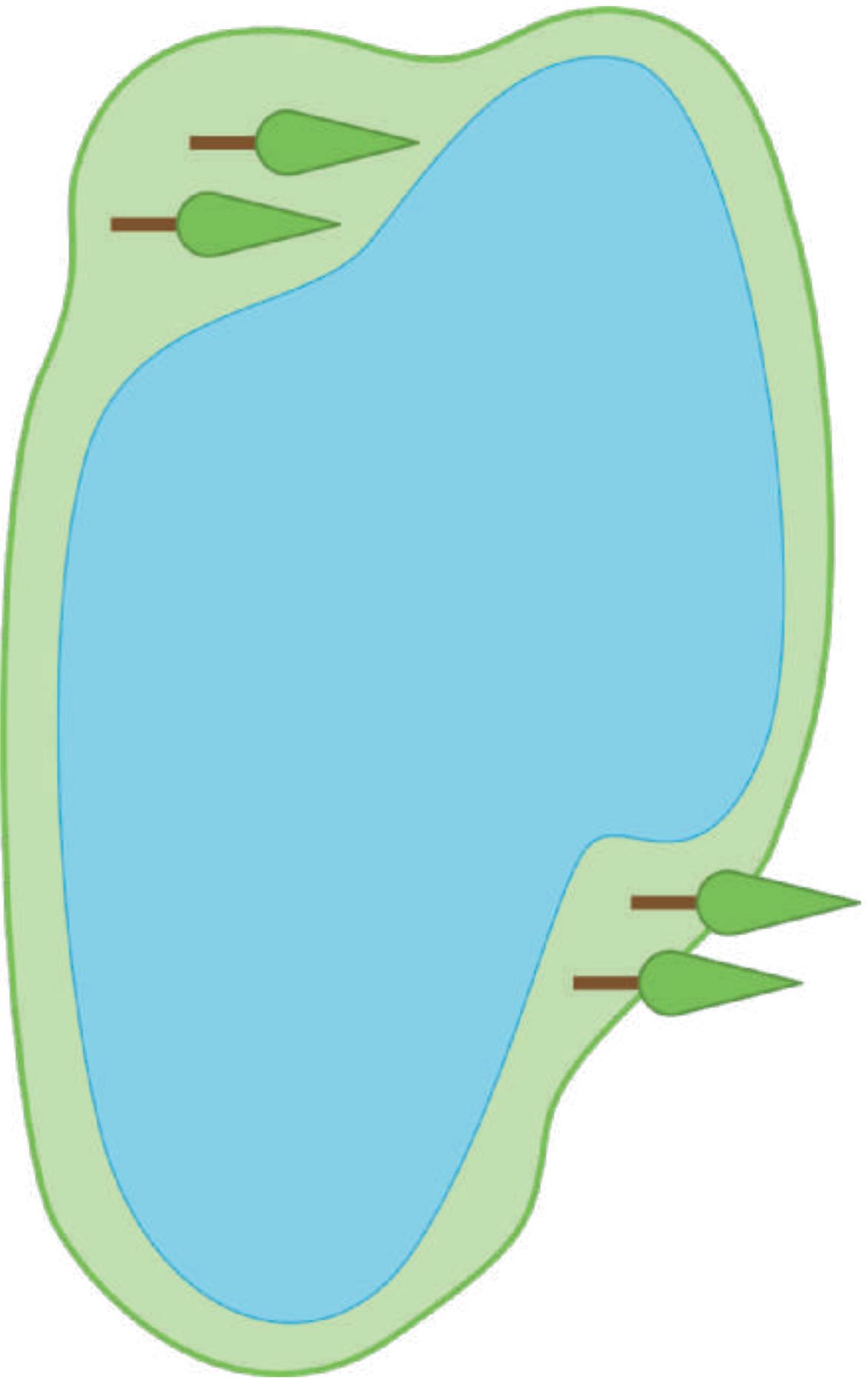
Picture G



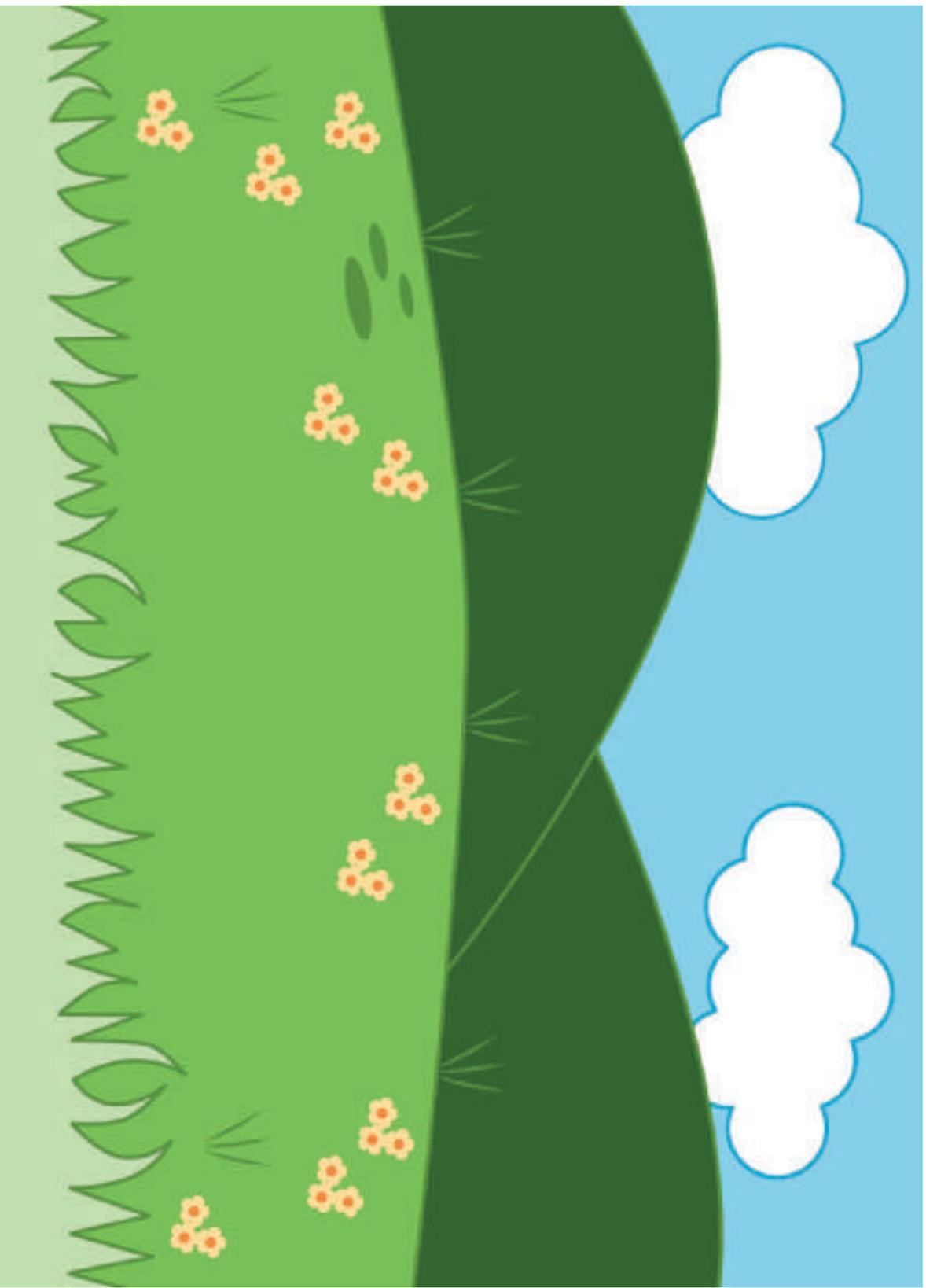
Picture H



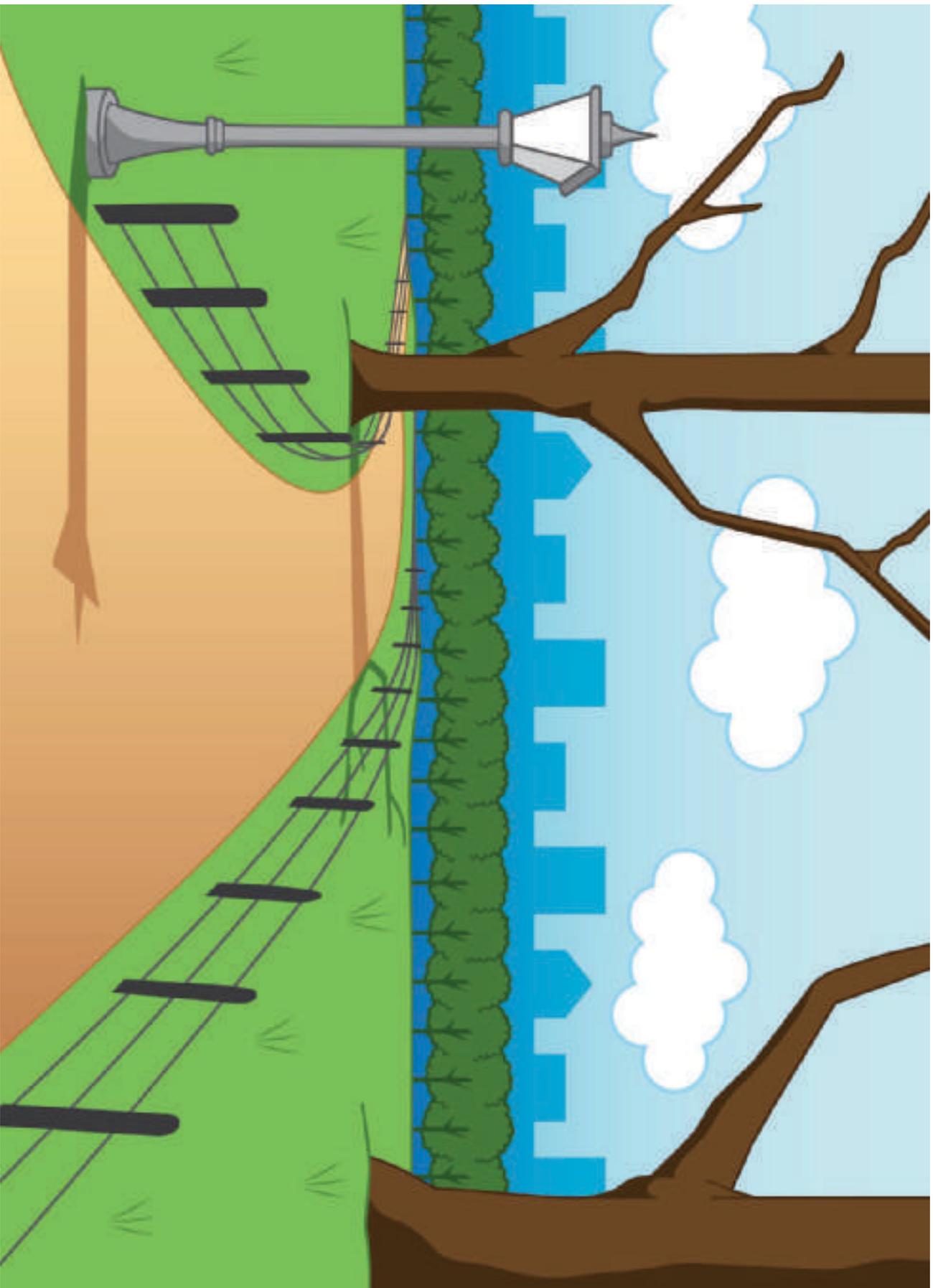
Picture A



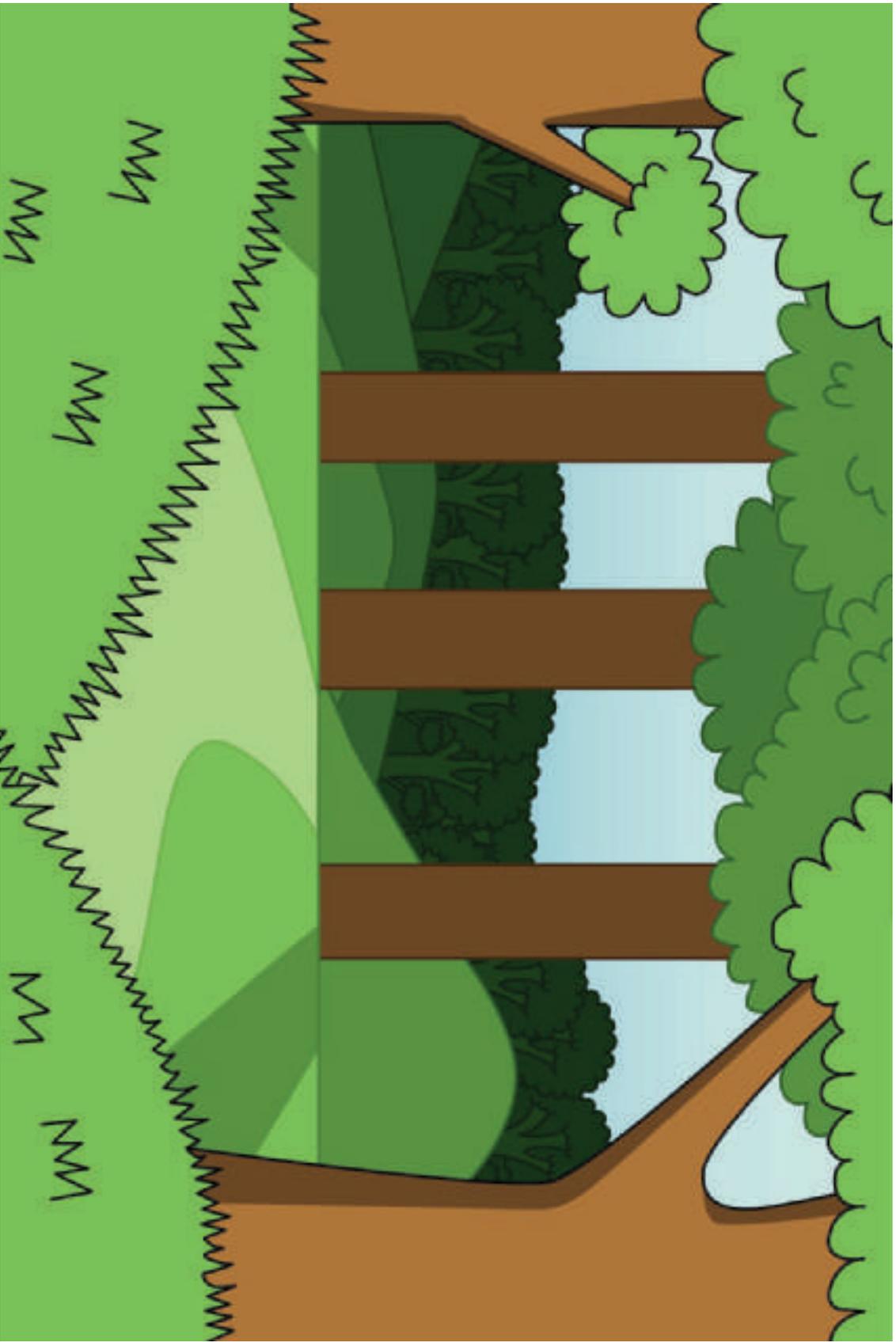
Picture B



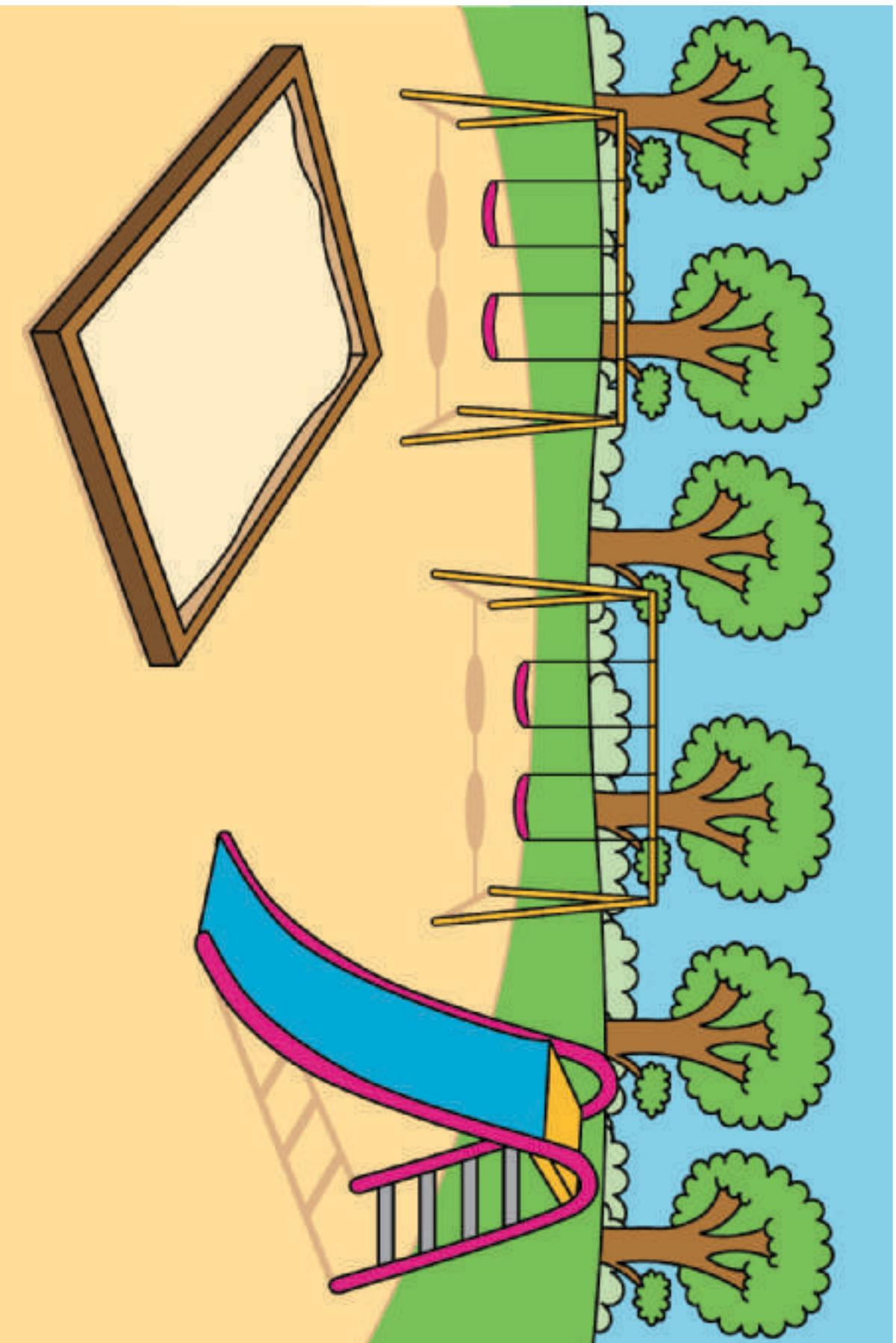
Picture D



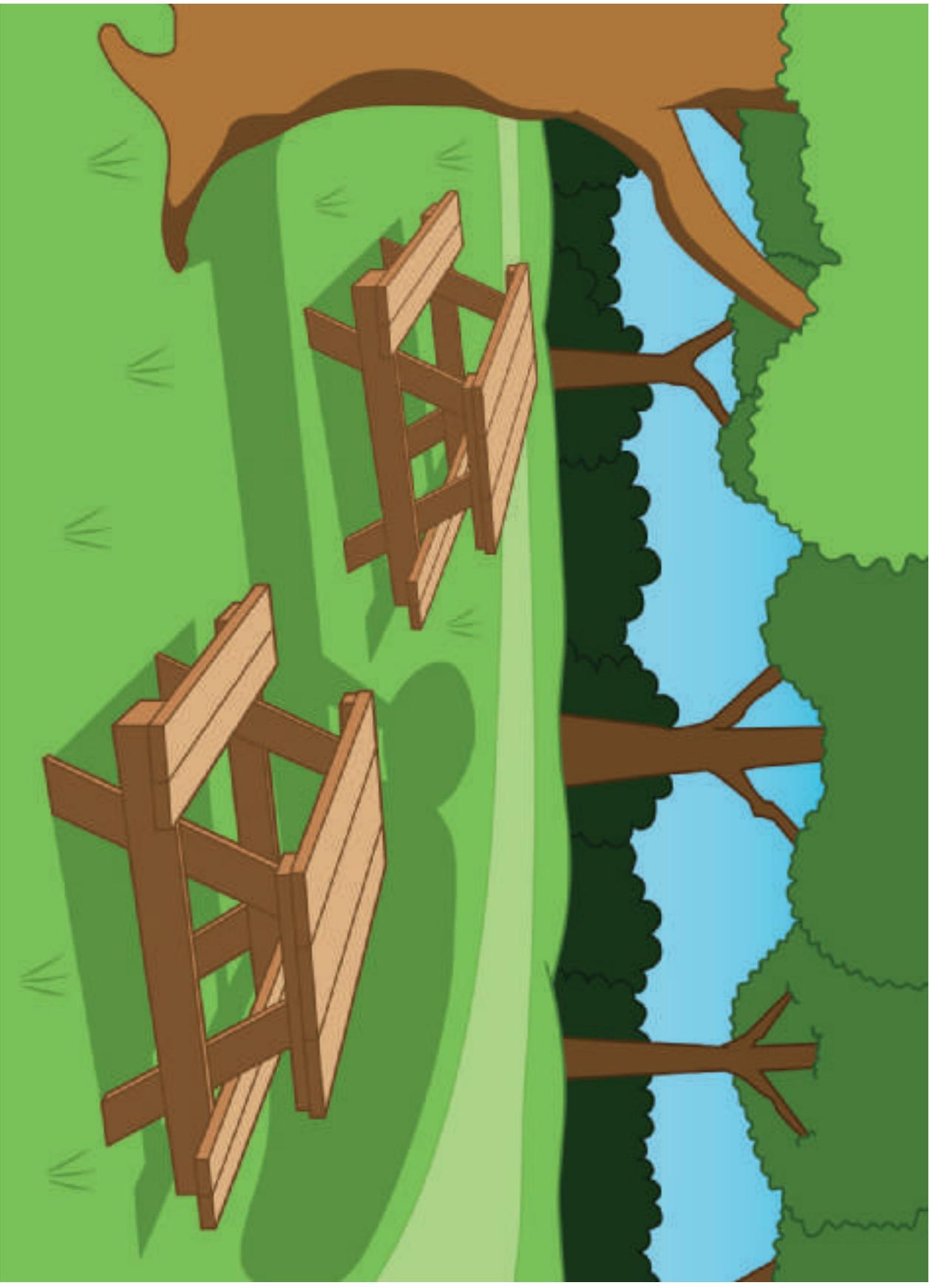
Picture E



Picture F



Picture G



Picture H



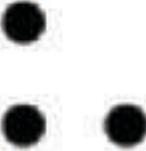
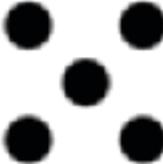
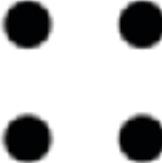
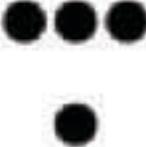
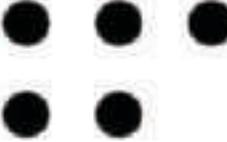
Counting Collections Stages 1 and 2 Recording Sheet

How many are there? Show how you counted.

My count:

How many? _____

Roll and Add Stage 1 Dot Images Mat

Roll and Add Stage 1 Recording Sheet

1. _____

2. _____

3. _____

4. _____

5. _____

Roll and Add Stage 1 Recording Sheet

6. _____

7. _____

8. _____

9. _____

10. _____

Roll and Add Stage 2 Recording Sheet

_____ + _____

_____ + _____

_____ + _____

_____ + _____

Roll and Add Stage 2 Recording Sheet

_____ + _____

_____ + _____

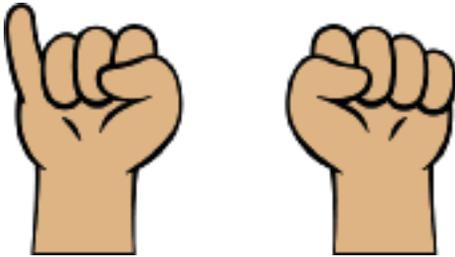
_____ + _____

_____ + _____

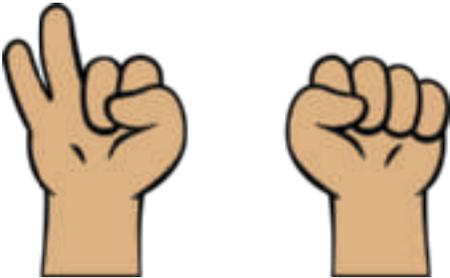
4	1	9
6	7	3
8	5	2

Math Fingers Cards

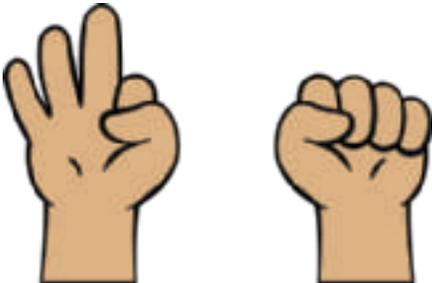
Math Fingers



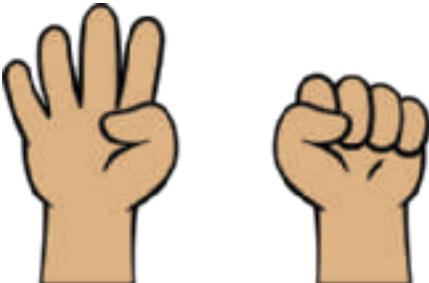
Math Fingers



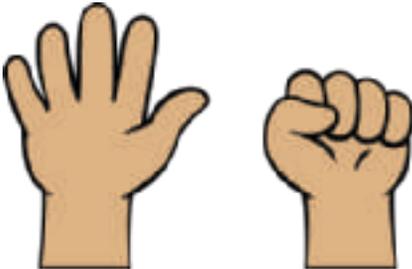
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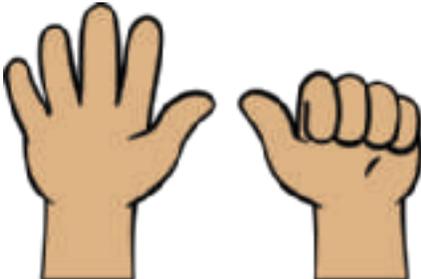
Math Fingers



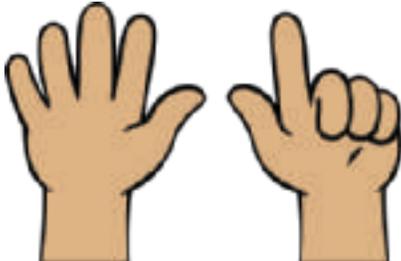
Math Fingers



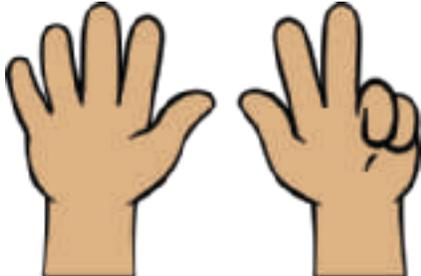
Math Fingers



Math Fingers

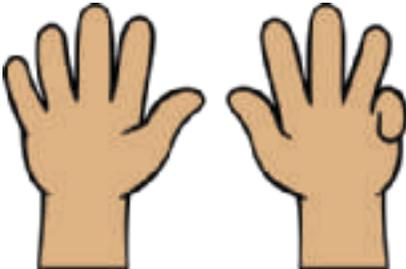


Math Fingers

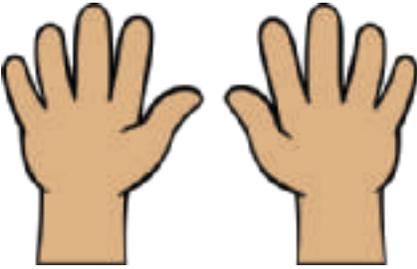


Math Fingers Cards

Math Fingers

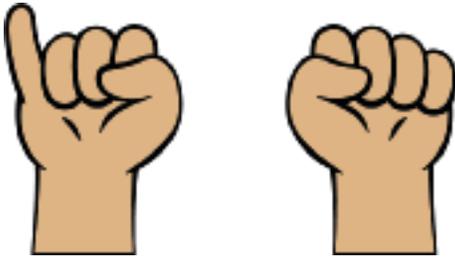


Math Fingers

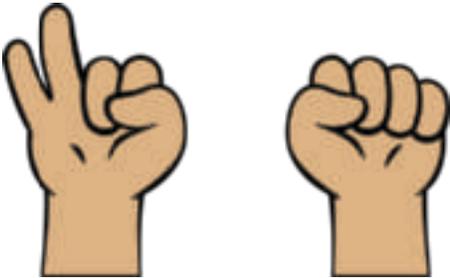


Math Fingers Cards

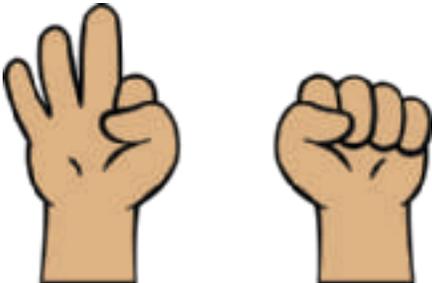
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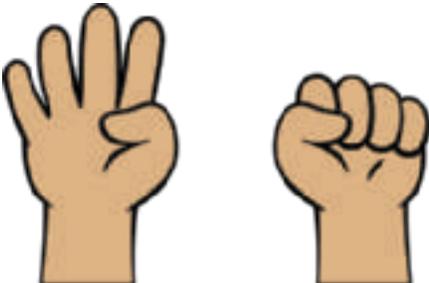
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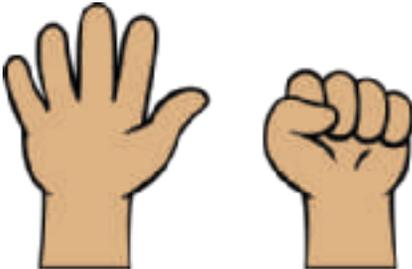
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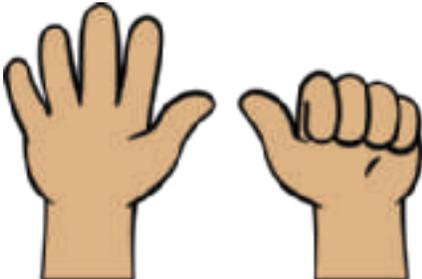
Math Fingers



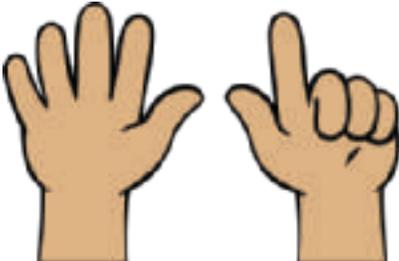
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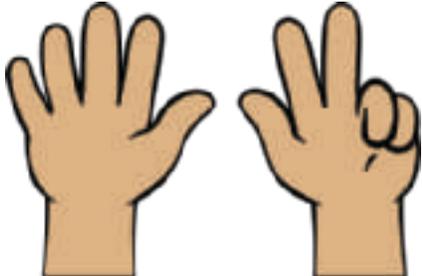
Math Fingers



Math Fingers

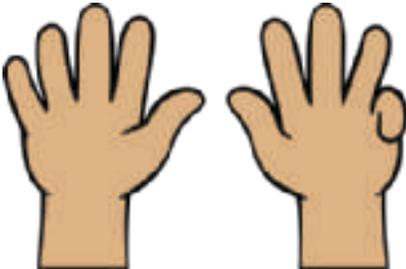


Math Fingers

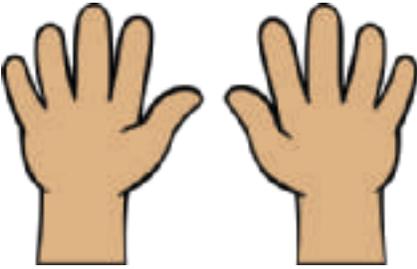


Math Fingers Cards

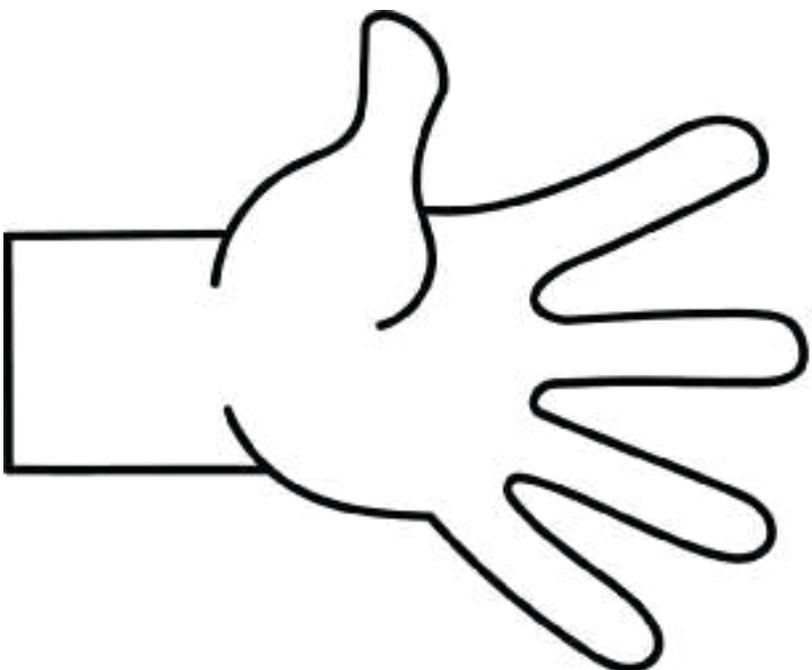
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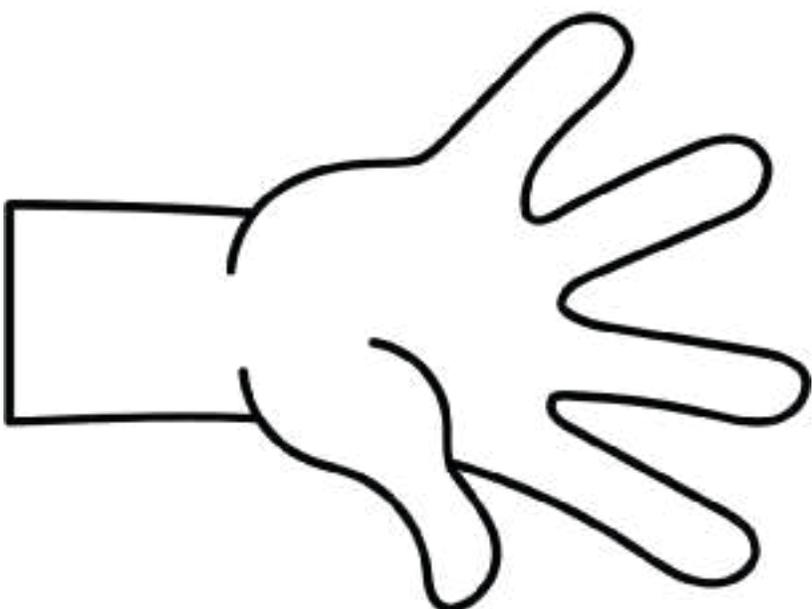
Math Fingers



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What's Behind My Back Stage 2 Recording Sheet Grade 1

Directions:

- Start with a tower of 10 cubes.
- Partner A: Put the tower behind your back, and break off some cubes. Show your partner the rest of the tower.
- Partner B: Record an addition equation with a blank to represent the missing cubes.
- Partner A: Ask "How many are behind my back? How do you know?"
- Switch roles and repeat.



$$\square + \square = \square$$

What's Behind My Back Stage 2 Recording Sheet Grade 1

$$\square + \square = \square$$

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