



Core Knowledge® MATHEMATICS

Understanding Addition and Subtraction



Teacher Guide



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Understanding Addition and Subtraction

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Understanding Addition and Subtraction Teacher Guide

Core Knowledge Mathematics™

Unit 4: Understanding Addition and Subtraction

At a Glance

Unit 4 is estimated to be completed in 18-20 days including 2 days for assessment.

This unit is divided into three sections including 16 lessons and 2 optional lesson.

- Section A—Count to Add and Subtract (Lessons 1-5)
- Section B—Represent and Solve Story Problems (Lessons 6-13)
- Section C—Addition and Subtraction Expressions (Lessons 14-18)

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 thirteen student centers.

- Math Libs
- Match Mine
- Roll and Add
- 5-frames
- Subtraction Towers
- Build Shapes
- Counting Collections
- Math Stories
- Math Fingers
- Bingo
- Number Race
- Shake and Spill
- Find the Value of Expressions

Unit 4: Understanding Addition and Subtraction

Unit Learning Goals

- Students relate counting to addition and solve addition and subtraction story problems within 10.

In this unit, students develop their understanding of addition and subtraction as they represent and solve story problems.

Previously, students built their counting skills and represented quantities in a group with their fingers, objects, drawings, and numbers. Here, they relate counting to the result of two actions: putting objects together or taking objects away. Students enact addition by counting the total number of objects in two groups, and subtraction by counting what remains after some objects are taken away. (The word “total” is used here instead of “sum” to reduce potential confusion with the word “some” or part of a whole.)



Students then make sense of stories without questions and later solve story problems of two types—Add To, Result Unknown and Take From, Result Unknown. Students represent the problems in different ways, by acting them out, drawing, using numbers, or using objects. Connecting cubes should be accessible in all lessons for students who wish to use them, including for cool-downs. All story problems should be read aloud by the teacher, multiple times if needed.

Students are also introduced to expressions, a symbolic way to represent addition and subtraction. Initially, the teacher records the process of adding and subtracting using words such as “5 and 3” or “4 take away 1.” Later, students see that “5 and 3” and “4 take away 1” can be expressed by $5 + 3$ and $4 - 1$, respectively. They learn that these expressions are read “5 plus 3” and “4 minus 1.” (Students are not expected to read expressions out loud or to use precise language at this point.)

Later in the section, students connect expressions to pictures and story problems. They find the value of addition and subtraction expressions within 10.

In a future unit, students will compose and decompose numbers up to 10 and solve other types of addition and subtraction problems.

Section A: Count to Add and Subtract

Standards Alignments

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

Section Learning Goals

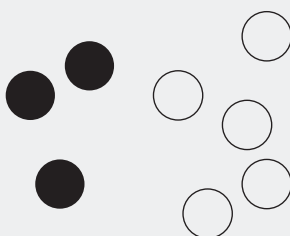
- Understand addition as putting together and subtraction as taking from.

In this section, students learn to see adding as putting together two groups and counting the total number of objects, and subtracting as taking away a number of objects from a group and counting what remains.

They represent combining and removing with physical objects. No stories or contexts are used here so that students can focus on the actions of putting together, adding to, and taking from. The language “add,” “put together,” “subtract,” and “take away” is used throughout the section to describe addition and subtraction.

Students learn to interpret a phrase such as “5 and 3” to mean combining two groups (5 in one group and 3 in the other) and a phrase such as “5 take away 3” to mean finding what remains after removing 3 objects from a group of 5. They also hear language that describes the result of those actions, such as: “5 and 3 is 8” and “5 take away 3 is 2.” No symbolic notation is used at this point.

Students also encounter and count groups of images in scattered configurations for the first time. This task highlights the need to keep track of what has been counted.



To keep track of the dots in this example, students may count all the black dots first and then the white dots or cross off dots as they count. They may also count in no particular order. Students see that although they may count the dots in a different order, they arrive at the same total.

 PLC: Lesson 3, Activity 2, Count Scattered Images

Section B: Represent and Solve Story Problems

Standards Alignments

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

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

Section Learning Goals

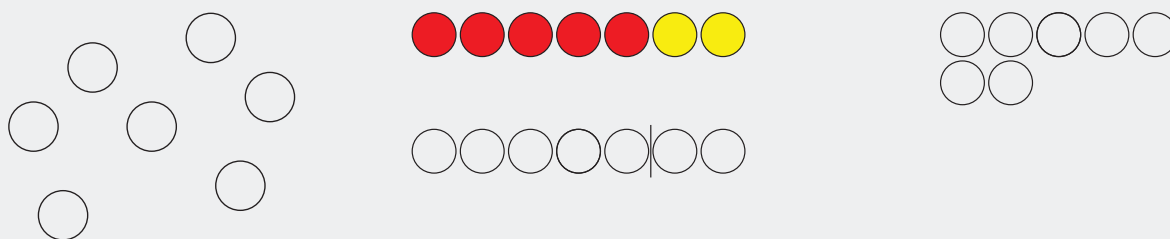
- Represent and solve Add To, Result Unknown and Take From, Result Unknown story problems within 10.

In this section, students represent and solve story problems with playgrounds and parks as contexts. The types of problems are limited to Add To, Result Unknown and Take From, Result Unknown.

Students begin by acting out and representing stories that don't include a question. Questionless story problems encourage students to think about the context and the action in the story without feeling pressure to solve the problem.

*There were 5 students jumping rope at recess.
2 more students came out to play with them.*

As questions are posed, students represent the problems with objects, math tools, drawings and numbers, and focus on explaining how their representation connects to the story. While they may represent a problem in any way that makes sense to them, students notice that organized drawings or objects make it easier to see the connections.



Students are also introduced to the concept of 0 representing a count of no objects. This idea may be abstract to students, so it is introduced in a Take From, Result Unknown story problem, where taking objects away leaves no remaining objects.

The term “expression” is introduced here. Students begin to see expressions as a way to record quantities being combined or removed. For instance, as a student describes what happens with their counters, the teacher writes the words “7 take away 3” and “ $7 - 3$,” and says “7 take away 3” and “7 minus 3.” Students are not expected to interpret expressions at this time.

Section C: Addition and Subtraction Expressions

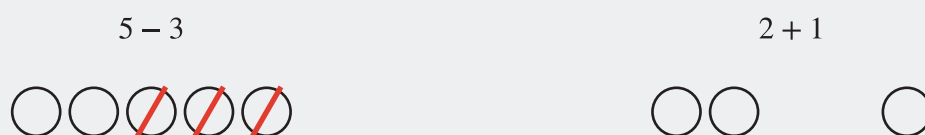
Standards Alignments

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

Section Learning Goals

- Find the value of addition and subtraction expressions within 10.
- Relate addition and subtraction expressions to story problems.

In this section, students formally work with expressions for the first time. They match expressions such as $3 + 2$ and $8 - 1$ to story problems and drawings and articulate why an expression represents a given problem or drawing. While students fill in addition and subtraction expressions, they are not expected to produce expressions independently in this section.



Students then transition from expressions that represent story problems or drawings to expressions without a context. To find the value of expressions, students may add or subtract in a way that makes sense to them, reasoning with fingers, objects, or drawings.

With repeated experience, students begin to notice regularity when adding and subtracting (MP8). For instance, they see that adding 1 results in the next number in the count sequence and that adding 0 results in the same number.



 PLC: Lesson 17, Activity 2, NoticeandPatterns

Throughout the Unit

Because students have had extended experience with the warm-up routines, this is the first unit where students do a different warm-up each day. Students relate subitizing to addition and subtraction in the How Many Do You See routine and begin to count on from a given number in the Choral Count

routine.

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.

This is also the first unit where students complete a written cool-down at the end of the lesson. In these lessons, teachers may choose to have students complete the cool-down before participating in centers.

Materials Needed

LESSON	GATHER	COPY
A.1	<ul style="list-style-type: none"> Connecting cubes Materials from previous centers Pattern blocks 	<ul style="list-style-type: none"> none
A.2	<ul style="list-style-type: none"> Connecting cubes Materials from previous centers 	<ul style="list-style-type: none"> Questions About Us Chart 5-Frame Template (groups of 1) Dots on 5-Frame Cards (0-5) (groups of 1) Roll and Add Stage 1 Dot Images Mat (groups of 1) Roll and Add Stage 1 Recording Sheet (groups of 1)
A.3	<ul style="list-style-type: none"> Materials from previous centers 	<ul style="list-style-type: none"> none
A.4	<ul style="list-style-type: none"> 5-frames Connecting cubes Counters Materials from previous centers 	<ul style="list-style-type: none"> Questions About Us Chart 5-Frame Template (groups of 1) Number Mat 1–5 (groups of 2)
A.5	<ul style="list-style-type: none"> Connecting cubes Counters Materials from previous centers 	<ul style="list-style-type: none"> Number Mat 1–5 (groups of 2)
B.6	<ul style="list-style-type: none"> Connecting cubes Materials from previous centers 	<ul style="list-style-type: none"> Number Mat 1–5 (groups of 2)
B.7	<ul style="list-style-type: none"> Materials from previous centers Two-color counters 	<ul style="list-style-type: none"> Playing On the Playground (groups of 30) Math Stories Stage 2 Backgrounds (groups of 6)

B.8	<ul style="list-style-type: none">● Connecting cubes or two-color counters● Crayons● 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● Markers● Materials from previous centers	<ul style="list-style-type: none">● Math Fingers Stage 3 Recording Sheet (groups of 1)
B.10	<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">● Questions About Us Chart 5-Frame Template (groups of 1)● Bingo Stages 1-3 Gameboard (groups of 4)● Dot Mat 1-5 (dots and 5-frames) (groups of 2)
B.11	<ul style="list-style-type: none">● Connecting cubes or two-color counters● Materials from previous centers	<ul style="list-style-type: none">● none
B.12	<ul style="list-style-type: none">● Connecting cubes or two-color counters● Materials from previous centers	<ul style="list-style-type: none">● none
B.13	<ul style="list-style-type: none">● Connecting cubes● Materials from previous centers● Two-color counters	<ul style="list-style-type: none">● Questions About Us Chart 5-Frame Template (groups of 1)● Math Stories Stage 2 Backgrounds (groups of 6)● Math Stories Stage 2 Recording Sheet (groups of 2)
C.14	<ul style="list-style-type: none">● Connecting cubes or counters● Materials from previous centers	<ul style="list-style-type: none">● none

C.15	<ul style="list-style-type: none">● Crayons● Materials from previous centers● Two-color counters	<ul style="list-style-type: none">● Shake and Spill Stage 3 Recording Sheet Kindergarten (groups of 1)
C.16	<ul style="list-style-type: none">● Connecting cubes or counters● Materials from previous centers	<ul style="list-style-type: none">● Number Mat 1–5 (groups of 2)● Roll and Add Stage 2 Recording Sheet (groups of 1)
C.17	<ul style="list-style-type: none">● Connecting cubes or counters● Materials from previous centers	<ul style="list-style-type: none">● Add 0 and 1 Mat (groups of 2)● 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)
C.18	<ul style="list-style-type: none">● Materials from previous centers	<ul style="list-style-type: none">● none

Center: Math Libs (K)

Stage 1: Draw 1–10

Activities

- Kindergarten.4.A1.3 (supporting)
- Kindergarten.4.A2.3 (supporting)
- Kindergarten.4.A3.3 (supporting)
- Kindergarten.4.A4.3 (supporting)
- Kindergarten.4.A5.3 (supporting)

Stage Narrative

Students roll a cube onto a number mat and write the number in the space provided next to one of the images. They draw a scene with the appropriate number of that image. Students repeat until each image has a number next to it and all of the images have been drawn in the scene.

Standards Alignments

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

Materials to Gather

Connecting cubes

Materials to Copy

Math Libs Scenes (groups of 2), Number Mat 1-10 (groups of 2)

Additional Information

Give 1 connecting cube per group of 2.

Center: Math Libs (K)

Stage 1: Draw 1–10

Activities

- Kindergarten.4.A1.3 (supporting)
- Kindergarten.4.A2.3 (supporting)
- Kindergarten.4.A3.3 (supporting)
- Kindergarten.4.A4.3 (supporting)
- Kindergarten.4.A5.3 (supporting)

Stage Narrative

Students roll a cube onto a number mat and write the number in the space provided next to one of the images. They draw a scene with the appropriate number of that image. Students repeat until each image has a number next to it and all of the images have been drawn in the scene.

Standards Alignments

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

Materials to Gather

Connecting cubes

Materials to Copy

Math Libs Scenes (groups of 2), Number Mat 1-10 (groups of 2)

Additional Information

Give 1 connecting cube per group of 2.

Center: Match Mine (K–1)

Stage 1: Pattern Blocks

Activities

- Kindergarten.4.A1.3 (supporting)
- Kindergarten.4.A2.3 (supporting)
- Kindergarten.4.A3.3 (supporting)
- Kindergarten.4.A4.3 (supporting)
- Kindergarten.4.A5.3 (supporting)

Stage Narrative

Students make larger shapes from pattern blocks.

Variation:

Students may use folders to hide their shape.

Standards Alignments

Addressing K.G

Materials to Gather

Folders, Pattern blocks

Center: Roll and Add (K)

Stage 1: Dots

Activities

- Kindergarten.4.A2.3 (addressing)
- Kindergarten.4.A3.3 (addressing)
- Kindergarten.4.A4.3 (addressing)
- Kindergarten.4.A5.3 (addressing)
- Kindergarten.4.C16.3 (supporting)
- Kindergarten.4.C17.3 (supporting)
- Kindergarten.4.C18.3 (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.4.C16.1 (addressing)
- Kindergarten.4.C16.3 (addressing)
- Kindergarten.4.C17.3 (addressing)
- Kindergarten.4.C18.3 (addressing)

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: 5-frames (K)

Stage 1: Add

Activities

- Kindergarten.4.A4.2 (addressing)
- Kindergarten.4.A4.3 (addressing)
- Kindergarten.4.A5.3 (addressing)
- Kindergarten.4.B6.3 (addressing)
- Kindergarten.4.B7.3 (addressing)
- Kindergarten.4.B8.3 (addressing)
- Kindergarten.4.B9.3 (addressing)
- Kindergarten.4.B10.3 (addressing)
- Kindergarten.4.B11.3 (addressing)
- Kindergarten.4.B12.3 (addressing)
- Kindergarten.4.B13.3 (addressing)

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.4.A5.2 (addressing)
- Kindergarten.4.A5.3 (addressing)
- Kindergarten.4.B6.3 (addressing)
- Kindergarten.4.B7.3 (addressing)
- Kindergarten.4.B8.3 (addressing)
- Kindergarten.4.B9.3 (addressing)
- Kindergarten.4.B10.3 (addressing)
- Kindergarten.4.B11.3 (addressing)
- Kindergarten.4.B12.3 (addressing)
- Kindergarten.4.B13.3 (addressing)

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: Subtraction Towers (K)

Stage 1: Objects

Activities

- Kindergarten.4.B6.3 (addressing)
- Kindergarten.4.B7.3 (addressing)
- Kindergarten.4.B8.3 (addressing)
- Kindergarten.4.B9.3 (addressing)
- Kindergarten.4.B10.3 (addressing)
- Kindergarten.4.B11.3 (addressing)
- Kindergarten.4.B12.3 (addressing)
- Kindergarten.4.B13.3 (addressing)

Stage Narrative

One partner builds a tower with 5–10 cubes. The other partner rolls a cube onto the number mat to figure out how many cubes to subtract. Students work together to figure out how many cubes are left.

Standards Alignments

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

Materials to Gather

Connecting cubes

Materials to Copy

Number Mat 1–5 (groups of 2)

Center: Build Shapes (K)

Stage 1: Match the Flat Shape

Activities

- Kindergarten.4.B6.3 (supporting)
- Kindergarten.4.B7.3 (supporting)
- Kindergarten.4.B8.3 (supporting)
- Kindergarten.4.B9.3 (supporting)

Stage Narrative

Students choose a shape card to build. Students check their work with their partner to be sure they both agree they made the shape correctly.

Standards Alignments

Addressing K.G.B.5

Materials to Gather

Play dough or modeling clay, Straws

Materials to Copy

Build Shapes Stage 1 and 2 Cards (groups of 2)

Additional Information

Bag of straws per group of 2 students:

- at least 6 straws in each size:
 - $\frac{1}{2}$ inch
 - 1 inch
 - $1\frac{1}{2}$ inch
 - $2\frac{3}{4}$ inches

Stage 2: Describe the Flat Shape

Activities

- Kindergarten.4.B6.3 (supporting)
- Kindergarten.4.B7.3 (supporting)
- Kindergarten.4.B8.3 (supporting)
- Kindergarten.4.B9.3 (supporting)

Stage Narrative

Students choose a shape card and describe the shape to their partner, who builds the shape based on the description.

Standards Alignments

Addressing K.G.A.1, K.G.B.5

Materials to Gather

Play dough or modeling clay, Straws

Materials to Copy

Build Shapes Stage 1 and 2 Cards (groups of 2)

Additional Information

Bag of straws per group of 2 students:

- At least 6 straws in each size:
 - $\frac{1}{2}$ inch
 - 1 inch
 - $1\frac{1}{2}$ inch
 - $2\frac{3}{4}$ inches

Center: Counting Collections (K-1)

Stage 1: Up to 20

Activities

- Kindergarten.4.B6.3 (supporting)
- Kindergarten.4.B7.3 (supporting)
- Kindergarten.4.B8.3 (supporting)
- Kindergarten.4.B9.3 (supporting)
- Kindergarten.4.B10.3 (supporting)
- Kindergarten.4.B11.3 (supporting)
- Kindergarten.4.B12.3 (supporting)
- Kindergarten.4.B13.3 (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: Math Stories (K–2)

Stage 1: How Many?

Activities

- Kindergarten.4.B8.3 (supporting)
- Kindergarten.4.B9.3 (supporting)
- Kindergarten.4.B10.3 (supporting)
- Kindergarten.4.B11.3 (supporting)
- Kindergarten.4.B12.3 (supporting)
- Kindergarten.4.B13.3 (supporting)
- Kindergarten.4.C14.3 (supporting)
- Kindergarten.4.C15.3 (supporting)
- Kindergarten.4.C16.3 (supporting)
- Kindergarten.4.C17.3 (supporting)
- Kindergarten.4.C18.3 (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.4.B7.3 (addressing)
- Kindergarten.4.B8.3 (addressing)
- Kindergarten.4.B9.3 (addressing)
- Kindergarten.4.B10.3 (addressing)
- Kindergarten.4.B11.3 (addressing)
- Kindergarten.4.B12.3 (addressing)
- Kindergarten.4.B13.3 (addressing)
- Kindergarten.4.C14.3 (addressing)
- Kindergarten.4.C15.3 (addressing)
- Kindergarten.4.C16.3 (addressing)
- Kindergarten.4.C17.3 (addressing)
- Kindergarten.4.C18.3 (addressing)

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)

Center: Math Fingers (K)

Stage 1: Show and Say

Activities

- Kindergarten.4.B10.3 (supporting)
- Kindergarten.4.B11.3 (supporting)
- Kindergarten.4.B12.3 (supporting)
- Kindergarten.4.B13.3 (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.4.B10.3 (supporting)
- Kindergarten.4.B11.3 (supporting)
- Kindergarten.4.B12.3 (supporting)
- Kindergarten.4.B13.3 (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.4.B9.3 (addressing)
- Kindergarten.4.B10.3 (addressing)
- Kindergarten.4.B11.3 (addressing)
- Kindergarten.4.B12.3 (addressing)
- Kindergarten.4.B13.3 (addressing)

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)

Center: Bingo (K)

Stage 1: Images

Activities

- Kindergarten.4.B11.3 (supporting)
- Kindergarten.4.B12.3 (supporting)
- Kindergarten.4.B13.3 (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.4.B11.3 (supporting)
- Kindergarten.4.B12.3 (supporting)
- Kindergarten.4.B13.3 (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.4.B10.3 (addressing)
- Kindergarten.4.B11.3 (addressing)
- Kindergarten.4.B12.3 (addressing)
- Kindergarten.4.B13.3 (addressing)

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: Number Race (K–1)

Stage 1: Numbers to 10

Activities

- Kindergarten.4.C14.3 (supporting)
- Kindergarten.4.C15.3 (supporting)
- Kindergarten.4.C16.3 (supporting)
- Kindergarten.4.C17.3 (supporting)
- Kindergarten.4.C18.3 (supporting)

Stage Narrative

Students take turns rolling a connecting cube onto a number mat and write the number (1–10) they land on, on the recording sheet. Students may want to use colored pencils to write the numbers.

Variation:

Students may use the Introduction master that allows them to trace each number to support their number writing skills.

Standards Alignments

Addressing K.CC.A.3

Materials to Gather

Colored pencils, crayons, or markers, Connecting cubes

Materials to Copy

Number Mat 1-10 (groups of 2), Number Race Stage 1 Recording Sheet for Tracing (groups of 1), Number Race Stage 1 Recording Sheet for Writing (groups of 1)

Additional Information

Each group of 2 needs 1 connecting cube.

Center: Shake and Spill (K–2)

Stage 1: Count

Activities

- Kindergarten.4.C16.3 (supporting)
- Kindergarten.4.C17.3 (supporting)
- Kindergarten.4.C18.3 (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.4.C16.3 (supporting)
- Kindergarten.4.C17.3 (supporting)
- Kindergarten.4.C18.3 (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.4.C15.3 (addressing)
- Kindergarten.4.C16.3 (addressing)
- Kindergarten.4.C17.3 (addressing)
- Kindergarten.4.C18.3 (addressing)

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: Find the Value of Expressions (K)

Stage 1: Color the Total or Difference

Activities

- Kindergarten.4.C17.3 (addressing)
- Kindergarten.4.C18.3 (addressing)

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)

Section A: Count to Add and Subtract

Lesson 1: Count 2 Groups of Objects

Standards Alignments

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

Building Towards K.OA.A.2

Teacher-facing Learning Goals

- Count to find the total number of objects given 2 groups of objects, up to 10.

Student-facing Learning Goals

- Let's find out how many objects there are in two groups.

Lesson Purpose

The purpose of this lesson is for students to count 2 groups of objects to find the total, within 10.

In a previous unit, students counted groups of up to 10 objects, recognized and wrote numbers 1–10, and connected numbers to quantities. In this lesson, students are introduced to addition as they count to find the total of 2 groups. Many students may approach these activities the same way that they answered “how many” questions in previous units—by putting the 2 groups of objects together and then counting all of the objects. The syntheses focus on different strategies for finding the total number of objects given 2 groups of objects.

The language “**add**,” “adding,” and “put together” is used throughout the lesson. Students are not expected to produce this language until later in the unit. The notation “___ and ___” is introduced by the teacher in Activity 2 as one way to represent combining the 2 groups. Students need time to see and hear teachers using this notation and other addition language before they can understand the more abstract language of “plus” or an expression “___ + ___” which will be introduced in a later section. Putting together two groups of objects to determine the total prepares students for work in a future unit in which they will represent and solve Put Together, Total Unknown story problems.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

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

Materials to Gather

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

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

Which centers from previous units can be used to support students in practicing counting groups of objects?

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

🕒 0 min

Unit 4, Section A Checkpoint

Standards Alignments

Addressing K.CC.B.5

Student-facing Task Statement

Lesson observations

Student Responses

- Keep track of which objects or images have been counted.
- Count to find the total or difference.

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

Warm-up

🕒 10 min

Which One Doesn't Belong: Groups

Standards Alignments

Building Towards K.OA.A.2

This warm-up prompts students to carefully analyze and compare different arrangements of objects. Students notice that the whole group of objects is composed of smaller parts in different ways.

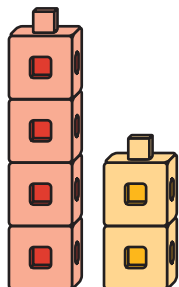
Instructional Routines

Which One Doesn't Belong?

Student-facing Task Statement

Which one doesn't belong?

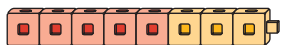
A



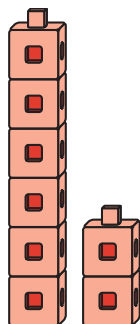
B



C



D



Launch

- Groups of 2
- Display 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 the image with four red connecting cubes and two yellow connecting cubes.
- "What are the two groups that you see?" (4 red cubes and 2 yellow cubes)
- Repeat these steps with each image.

Student Responses

Sample responses:

- A is the only one that doesn't have 8.
- B is the only one with counters instead of cubes.
- C is the only one that is just 1 group.
- D is the only one that is just 1 color. It doesn't have any yellow.

Activity 1

🕒 10 min

Put Together Pattern Blocks

Standards Alignments

Addressing K.CC.B.5

Building Towards K.OA.A.2

The purpose of this activity is for students to find the total number of pattern blocks in their bag. Students may notice that their pattern blocks are made up of 2 groups, triangles and squares. Each bag of pattern blocks can have a different total number of objects and a different number of triangles and squares. In the synthesis, students share how they found the total number or pattern blocks.

🌐 Access for English Learners

MLR8 Discussion Supports. Synthesis: Use multimodal examples to show the meaning of addition. Use hand gestures or pattern blocks with the verbal descriptions “put together” and “add.”

Advances: Listening, Representing

Materials to Gather

Pattern blocks

Required Preparation

- Each group of 2 needs a bag of up to 10 pattern blocks with a mix of squares and triangles.

Student-facing Task Statement

How many pattern blocks do you have?

Launch

- Groups of 2

I have _____ pattern blocks.

Student Responses

Students determine how many pattern blocks there are and write a number to record the total.

- Give each group a bag of pattern blocks.
- “Work with your partner to figure out how many pattern blocks you have.”

Activity

- 2 minutes: partner work time
- “The sentence says, ‘I have ____ pattern blocks.’ Now write a number on the line to show how many you have.”
- 1 minute: independent work time
- “Pair up with another group. Show them how you figured out how many pattern blocks you have.”
- 4 minutes: small-group work time
- Monitor for a group that counts the 2 groups (3 triangles and 5 squares) as well as all of the pattern blocks (8 pattern blocks). Monitor for another group that only counts all of the pattern blocks.

Synthesis

- Invite previously identified students to share how they counted their pattern blocks.
- “What is the same and what is different about how each group counted the pattern blocks?” (They both counted all of the blocks. One group counted all of the pattern blocks together and the other group counted the squares first and then the triangles.)
- “When we put together, or add, the number of squares and the number of triangles, we can figure out how many shapes we have altogether.”

Advancing Student Thinking

If students count each object more than once or do not count some of the objects, consider

asking:

- “Can you show me how you counted the pattern blocks? How do you know that you’ve counted all of the pattern blocks?”
- “How could the counting mat (or 5-frame) help you keep track of which pattern blocks you’ve counted?”

Activity 2

🕒 10 min

Put Together Connecting Cubes

Standards Alignments

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

Building Towards K.OA.A.2

The purpose of this activity is for students to find the total number of cubes they have when they add their cubes and their partner’s cubes. In the synthesis students discuss how although someone might count each group separately, that is not enough to determine how many cubes there are altogether. After counting each group, you need to put them together and count all of the cubes to find the total.

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to verbalize their strategy for counting their connecting cubes before they begin. If time allows, students can share with their partner before they begin to implement their strategy. Give students access to 5-frames and a counting mat to help them count their connecting cubes.

Supports accessibility for: Organization, Conceptual Processing, Language

Materials to Gather

Connecting cubes

Required Preparation

- Each student needs a tower with up to 5 connecting cubes.

Student-facing Task Statement

How many cubes do you and your partner have together?

We have _____ cubes.

We have _____ cubes.

Student Responses

Students count both groups of cubes to find the total.

Launch

- Groups of 2
- Give each student a cube tower.
- “You have some cubes and your partner has some cubes. Work together to figure out how many cubes you and your partner have altogether.”

Activity

- 2 minutes: partner work time
- Monitor for a group that puts the 2 groups of cubes together and counts all of them to share. Monitor for another group that counts each tower first before putting them together and counting all of the cubes.
- “The sentence says, ‘We have ____ cubes.’ Now write a number to show how many cubes you and your partner have altogether.”
- 30 seconds: independent work time
- Invite previously selected groups to share how they found the total number of cubes.
- “Both groups added the 2 groups of cubes to figure out how many cubes they had altogether.”
- “Now let’s do this one more time. Switch cubes with another group near you. Find out how many cubes you and your partner have now. Write a number to show how many cubes you and your partner have altogether.”
- 2 minutes: partner work time

Synthesis

- Display a tower of 4 cubes and a tower of 3 cubes.
- “This group wants to find how many cubes there are altogether. First they counted and found out there are 4 cubes in this

tower and 3 cubes in the other tower. What should they do to figure out how many cubes they have altogether?" (They should put their cubes together and count all of them).

- "How many cubes are there altogether?" (7)
- "One tower had 4 cubes and the other had 3 cubes. We can write that as '4 and 3.' When we **add** the cubes together, we get a total of 7 cubes. 4 and 3 is 7."

Activity 3

🕒 25 min

Centers: Choice Time

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

Students choose from any stage of previously introduced centers.

- Math Libs
- Match Mine

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:
 - Math Libs
 - Match Mine

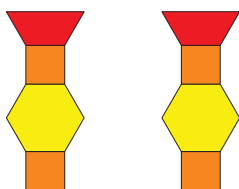
Student-facing Task Statement

Choose a center.

Math Libs



Match Mine



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

- Display a shape made with 7 pattern blocks, some triangles and some squares.
- “Priya was playing Match Mine and made this shape with her pattern blocks. What do you notice? What do you wonder?”
- If needed, ask “How many pattern blocks did Priya use?”

Lesson Synthesis

🕒 5 min

Display a shape made with 7 pattern blocks, some hexagons and some squares.

“Today we counted 2 groups to figure out how many objects we had altogether. Mai says we need to count the hexagons first and then count the squares. What do you think?”

Lesson 2: Count 2 Groups of Images

Standards Alignments

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

Building Towards K.OA.A.2

Teacher-facing Learning Goals

- Count to find the total number of images given two groups of organized images, up to 10.

Student-facing Learning Goals

- Let's find out how many things there are in two groups.

Lesson Purpose

The purpose of this lesson is for students to count 2 groups of images to find the total, within 10.

In a previous lesson, students counted 2 groups of objects to find the total number of objects. In this lesson, students count images and discuss how they counted the 2 groups to find the total number of images.

Access for:



Students with Disabilities

- Action and Expression (Activity 2)



English Learners

- MLR8 (Activity 1)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Connecting cubes: Activity 3
- Materials from previous centers: Activity 3

Materials to Copy

- Questions About Us Chart 5-Frame Template (groups of 1): Warm-up
- Dots on 5-Frame Cards (0-5) (groups of 1): Activity 1
- Roll and Add Stage 1 Dot Images Mat (groups of 1): Activity 3
- Roll and Add Stage 1 Recording Sheet (groups of 1): Activity 3

Required Preparation

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 how you can reinforce the work done in today's lesson outside of math class. When can you ask students questions involving finding the total of two groups of objects or images?

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

🕒 0 min

Unit 4, Section A Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Keep track of which objects or images have been counted.
- Count to find the total or difference.

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

Warm-up

🕒 10 min

Questions About Us: Winter or Summer?

Standards Alignments

Addressing K.CC.B.5

The purpose of this warm-up is for students to consider concepts of number in a familiar context. Students may use the structure of the 5-frames on the chart to determine how many students made each choice (MP7). Students have an opportunity to hear and practice the count sequence. Adjust the context to better reflect students' interests and experiences as needed.

Instructional Routines

Questions About Us

Materials to Copy

Questions About Us Chart 5-Frame Template
(groups of 1)

Required Preparation

- Cut out enough 5-frames to make a chart with a space for each student to answer the survey question.

Student Responses

Sample responses:

- The 5-frames keep the circles organized so they are easier to count.
- I know the first 5-frame has 5 because it is full so I can count on from there.

Launch

- Groups of 2
- Display Questions About Us chart.
- "Which season do you like better: winter or summer?"
- 30 seconds: quiet think time
- Record each student's choice with a circle in a 5-frame.

Activity

- "How can we figure out how many students like winter better?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- "How many students like winter better?"
- If needed, ask, "How can we figure out how

many students like summer better?"

- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- "How many students like summer better?"

Synthesis

- "How can the 5-frames help us figure out how many people like summer?"

Activity 1

🕒 10 min

Put Together Dots on 5-Frames

Standards Alignments

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

The purpose of this activity is for students to find the total number of dots on two 5-frame cards. Students may use the structure of the 5-frame to help them find the total number of dots. For example, if there is a 5-frame with 4 dots and a 5-frame with 1 dot, students may notice that if you move the 1 dot to the 5-frame with the 4 dots, the 5-frame would be full. Although using the structure may help some students, many students will count all the dots on both cards to determine the total number of dots. Both strategies demonstrate an understanding of adding two groups together to find the total number of dots.

🌐 Access for English Learners

MLR8 Discussion Supports. Invite students to begin partner interactions by repeating the questions, "How many dots are there altogether?" and "How do you know?" This gives both students an opportunity to produce language.

Advances: Conversing

Materials to Copy

Dots on 5-Frame Cards (0-5) (groups of 1)

Required Preparation

- Cut out a set of cards for each student.

Student-facing Task Statement

There are _____ dots.

There are _____ dots.

There are _____ dots.

There are _____ dots.

There are _____ dots.

Student Responses

Answers vary.

Launch

- Groups of 2
- Give each student a set of cards.
- Display a 5-frame card with 4 dots and a 5-frame card 1 dot.
- "I have two 5-frames with some dots in them. How many dots are there altogether? How do you know?" (5 dots. I counted them. I showed 4 and 1 on my fingers and counted them. If I moved the dot to the other 5-frame, it would be full. That means there are 5 dots.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- "I have 5 dots together, so I'm going to write a 5 on the line. Now my sentence says 'There are 5 dots'."

Activity

- "It's your turn to play this game with your partner. Each of you will flip over one 5-frame card. Then, figure out how many dots you have together and write the number on the line."
- 5 minutes: partner work time

Synthesis

- Display a 5-frame with 2 dots and a 5-frame with 5 dots.
- "How many dots are there altogether?"

- “If we add together the 2 dots and 5 dots, we have 7 dots. 2 and 5 is 7.”
- Write “2 and 5 is 7.”
- Invite students to repeat chorally in unison 1–2 times: “2 and 5 is 7.”

Activity 2

🕒 10 min

How Many Apples?

Standards Alignments

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

Building Towards K.OA.A.2

The purpose of this activity is for students to count 2 groups of images to find the total. Students recognize the 2 groups as well as the total when both groups are put together. Students repeat addition language such as, “5 apples and 3 apples is 8 apples” (MP6).

🕒 Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Some students may benefit from using 5-frames to help count the number of green and red apples. Give students access to 5-frames and counters to represent the apples in each problem. Invite students to use the 5-frames to figure out how many apples there are altogether. *Supports accessibility for: Organization, Conceptual Processing*

Student-facing Task Statement

1.



Launch

- Groups of 2
- Display the first problem.
- “How many red apples are there?”
- 30 seconds: partner work time
- “How many green apples are there?”
- 30 seconds: partner work time

There are _____ apples.

2.



There are _____ apples.

3.



There are _____ apples.

4.



There are _____ apples.

- "How many apples are there altogether?"
- 30 seconds: partner work time
- "4 apples and 3 apples is 7 apples."
- "As you continue working to find out how many apples there are altogether, tell your partner how many red apples there are, how many green apples there are, and how many apples there are altogether."

Activity

- 5 minutes: partner work time
- Monitor for students using the language "___ apples and ___ apples is ___ apples."

Synthesis

- Invite previously selected students to share how many red apples and green apples there are and the total number of apples.
- For each image, have students repeat, "___ apples and ___ apples is ___ apples."

Student Responses

1. 7
2. 6
3. 9
4. 8

Activity 3

🕒 25 min

Introduce Roll and Add, Dots

Standards Alignments

Addressing	K.CC.B.5
Building Towards	K.OA.A.2

The purpose of this activity is for students to learn stage 1 of the Roll and Add center. Students count to find the total number of dots in two groups of images. After they participate in the center, students choose from any stage of previously introduced centers. The recording sheet is printed in the student book for this activity. There is a Introduction master available for students to use during centers in future lessons.

- Math Libs
- Match Mine

Materials to Gather

Connecting cubes, Materials from previous centers

Materials to Copy

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

Required Preparation

- Each group of 2 needs 2 connecting cubes.
- Gather materials from
 - Math Libs, Stage 1
 - Match Mine, Stage 1

Student-facing Task Statement

How many dots?

1.

2.

3.

4.

5.

Choose a center.

Launch

- Groups of 2
- Give each group a dot image mat and two connecting cubes.
- “We are going to learn a center called Roll and Add. You and your partner both roll a cube onto the mat. Then find the total number of dots in both groups. When you and your partner agree on the total number of dots, write the number on your recording sheet.”

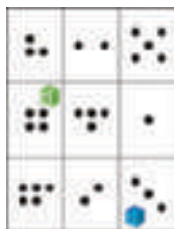
Activity

- 10 minutes: partner work time
- “Now you can choose another center. You can also continue playing Roll and Add.”
- 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

- “What is 1 thing you and your partner did really well during center time today? What is 1 thing you are still working on?”

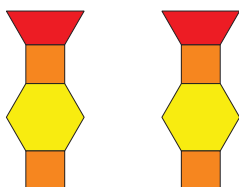
Roll and Add



Math Libs



Match Mine



Lesson Synthesis

⌚ 5 min

Display a 5-frame with 5 dots and another 5-frame with 3 dots.

"5 and 3 is 8. Where do you see 5 and 3 is 8 in the 5-frames?" (There are 5 dots in one 5-frame and 3 dots in the other 5-frame. If you count them all, there are 8 dots.)

Lesson 3: Count 2 Groups of Scattered Images

Standards Alignments

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

Teacher-facing Learning Goals

- Count to find the total number of images given two groups of organized or scattered images, up to 10.

Student-facing Learning Goals

- Let's find out how many things there are in two scattered groups.

Lesson Purpose

The purpose of this lesson is for students to count to find the total number of images in 2 scattered groups.

In previous lessons, students have counted to find the total number of objects in 2 groups and the total number of images in 2 organized groups. In this lesson, students continue to put together 2 groups in order to find the total. The focus of the lesson synthesis is on keeping track of images that have been counted so each image is counted once and only once. This is the first lesson where students participate in a cool-down after the lesson synthesis.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

How does the work of this lesson and the previous lesson lay a foundation for solving addition story problems?

Activity 2	10 min
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Activity 3	20 min
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Lesson Synthesis	5 min
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Cool-down	5 min
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Cool-down (to be completed at the end of the lesson)

🕒 5 min

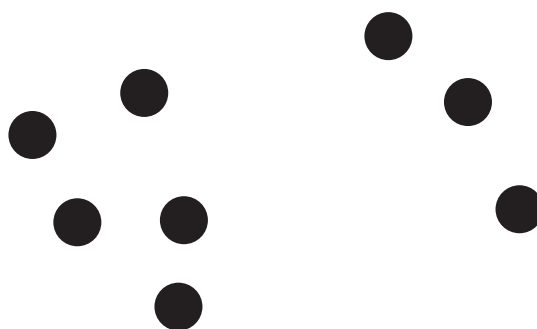
How Many Dots?

Standards Alignments

Addressing K.CC.B.5

Student-facing Task Statement

How many dots are there?



There are _____ dots.

Student Responses

8

Begin Lesson

Warm-up

🕒 10 min

Choral Count: Count to 40

Standards Alignments

Addressing K.CC.A.1

The purpose of this warm-up is for students to extend the verbal count sequence to 40. It builds on previous experiences with counting to 30. This is an opportunity to see if students are able to say the number sequence in order. Students also see the numbers written as they say each number.

Instructional Routines

Choral Count

Student Responses

Students count to 40.

Launch

- Groups of 2
- "Let's count to 40."

Activity

- Count to 40 together.
- Record as students count.
- Count to 40 1–2 times. Point to the numbers as students count.

Synthesis

- "Count with your partner. Take turns saying the next number. Count as high as you can."
- "What number did you count to?"

Activity 1

🕒 10 min

Count Organized and Scattered Images

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to count to find the total number of images in 2 groups. In each problem, one group of images is organized and the other group is scattered. In the synthesis, students discuss how they kept track of the images they counted and continue to hear the language, "___ and ___ is ___."

Student-facing Task Statement

1.



There are _____ balls.

2.



There are _____ balls.

3.

Launch

- Groups of 2
- "Find the total number of balls shown for each problem. Then write the number."

Activity

- 5 minutes: partner work time
- Monitor for students who cross off the images they have counted.

Synthesis

- Invite previously selected students to share how they found the total number of balls for the problem with 3 soccer balls and 6 footballs.
- "How does ____ know that they counted all the balls?" (She crossed them off as she counted them and they are all crossed off.)
- "There are 9 balls. How many soccer balls are there? How many footballs are there?"
- "3 soccer balls and 6 footballs is 9 balls. We can say '3 and 6 is 9.'"
- Write "3 and 6 is 9."



There are _____ balls.

4.



There are _____ balls.

Student Responses

1. 9
2. 7
3. 9
4. 10

Activity 2

Count Scattered Images

🕒 10 min

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.CC.B.5

The purpose of this activity is for students to count to find the total number of images in 2 groups. In this activity, both groups of images are scattered. In the synthesis, students discuss different ways the images could be counted in order to find the total. When students count scattered images they need to be strategic and count in an organized way to make sure that they count each image once and only once (MP6).

Access for English Learners

MLR8 Discussion Supports. Synthesis: To amplify student language as they compare, contrast, and connect the groups of objects, encourage students to point to the relevant parts of the displays as they speak.

Advances: Representing, Conversing

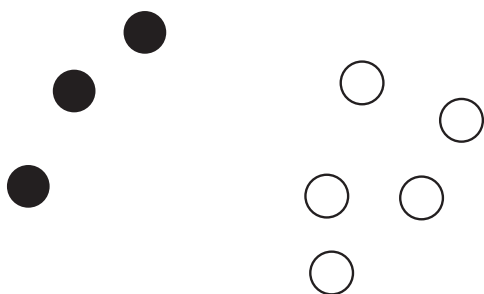
Access for Students with Disabilities

Representation: Internalize Comprehension. Some students may benefit from recalling the strategy they used in the previous activity by crossing off each image as they counted them. Begin by asking students to recall what strategy was used in the previous activity to keep track of the images they counted.

Supports accessibility for: Memory, Organization, Conceptual Processing

Student-facing Task Statement

1.



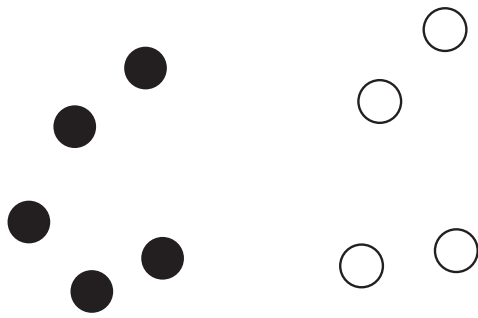
2.

Launch

- Groups of 2
- “Now you are going to find the total number of circles. This time both groups are scattered. Remember to keep track of the circles you have counted. One way to keep track is to cross out each one as you count it.”

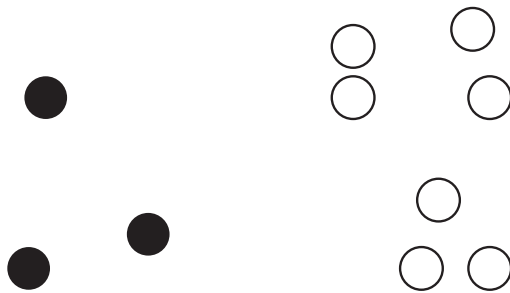
Activity

- 5 minutes: partner work time
- Monitor for students who count the scattered images in different orders but find the same total. For example, students might count all of the black circles first, or they might count across the black and white circles in a way that makes sense to them for keeping track of what they have counted.



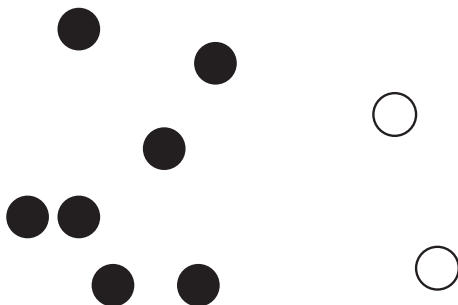
There are _____ circles.

3.



There are _____ circles.

4.



Synthesis

- Display the image of 3 black circles and 5 white circles.
- Invite previously identified students to share how they counted to find the total number of circles.
- "Some of us counted all of the black circles first. Some of us counted the black and white circles together. We all found the same total."

There are _____ circles.

Student Responses

1. 8
2. 9
3. 10
4. 9

Advancing Student Thinking

If students count each image more than one time or do not count some of the images, consider asking:

- “Can you show me how you counted the circles?” As students count, ask “Which circles have you counted? Which circles do you still need to count?”
- “What could you do to help you remember which circles you have counted already?” If needed, ask “How could crossing out the circles help you make sure you count all of the circles?”

Activity 3

🕒 20 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice writing numbers, counting to find the total of 2 groups, and describing and building with shapes.

Students choose from any stage of previously introduced centers.

- Roll and Add
- Math Libs
- Match Mine

Materials to Gather

Materials from previous centers

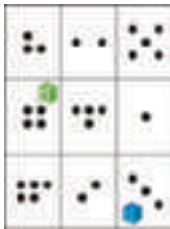
Required Preparation

- Gather materials from:
 - Roll and Add, Stage 1
 - Math Libs, Stage 1
 - Match Mine, Stage 1

Student-facing Task Statement

Choose a center.

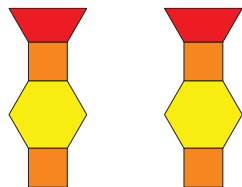
Roll and Add



Math Libs



Match Mine



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 that you got better at during centers today?"

Lesson Synthesis

🕒 5 min

Draw 7 circles in a row. Draw 7 scattered circles.

"Which group of circles would be easier to count? Why do you think that?"

"What could we do to keep track as we count the group of scattered circles?" (We could cross off each thing as we count it.)

Complete Cool-Down

Response to Student Thinking

Students count more or fewer than 8 dots.

Next Day Support

- Use the next day's warm-up to discuss the cool-down and how to keep track when counting images.

Lesson 4: Add with Objects

Standards Alignments

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

Building Towards K.OA.A.2

Teacher-facing Learning Goals

- Use objects to show the action of addition.

Student-facing Learning Goals

- Let's use counters to add.

Lesson Purpose

The purpose of this lesson is for students to use objects to show the action of addition.

In previous lessons, students counted two groups to find the total. They heard and used addition language such as "put together," "altogether," "total," and "2 and 3 is 5." In this lesson, students begin with 1 group of counters and add more. They count to find the total number of counters. Students continue to hear and use addition language in this lesson.

Access for:



Students with Disabilities

- Representation (Activity 1)



English Learners

- MLR8 (Activity 2)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

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

Materials to Copy

- Questions About Us Chart 5-Frame Template (groups of 1): Warm-up
- Number Mat 1–5 (groups of 2): Activity 2

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

Think about who volunteered to share their thinking with the class today. Are the same students always volunteering, while some

Activity 1	10 min	students never offer to share? What can you do to help the class understand the value of hearing the ideas of every mathematician?
Activity 2	10 min	
Activity 3	25 min	
Lesson Synthesis	5 min	

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

⌚ 0 min

Unit 4, Section A Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Count to find the total or difference.
- Add or take away objects to represent addition and subtraction.

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

Warm-up

⌚ 10 min

Questions About Us: Bird or Fish?

Standards Alignments

Addressing K.CC.B.5

Building Towards K.OA.A.2

The purpose of this warm-up is for students to consider concepts of number in a familiar context. Students may use the structure of the chart to determine how many students made each choice (MP7).

In this warm-up, students count two groups to find the total. Students have an opportunity to hear and practice the count sequence.

Instructional Routines

Questions About Us

Materials to Copy

Questions About Us Chart 5-Frame Template
(groups of 1)

Required Preparation

- Cut out enough 5-frames to make a chart with a space for each student to answer the survey question.

Launch

- Groups of 2
- Display the Questions About Us chart.
- “Would you rather be a bird or a fish?”
- 30 seconds: quiet think time
- Record each student’s choice with a circle in a 5-frame.

Activity

- “How many students would rather be a bird?
How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- “How many students would rather be a fish?
How do you know?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.

Synthesis

- “How can we find out how many students chose bird or fish?” (We can count both groups together. We can count all the circles.)
- Count each circle together.
- “How many students chose bird or fish?”

Activity 1

🕒 10 min

Add Counters

Standards Alignments

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

The purpose of this activity is for students to represent the action of addition with counters. Students begin with 1 group of counters and add more counters. Students count to find the total number of counters after more were added.

🕒 Access for Students with Disabilities

Representation: Develop Language and Symbols. Students may benefit from using different colors to represent the counters they started with and the counters they added on to the 5-frame. Make connections between the counters that represent the amount they started with and the different colored counters that represent the amount they added on to the 5-frame.

Supports accessibility for: Organization, Visual-Spatial Processing

Materials to Gather

5-frames, Counters

Student-facing Task Statement

1. Count out 2 counters.
Add 2 more counters.

Launch

- Give each student at least 10 counters and access to 5-frames.
- “Count out 3 counters. You can use a 5-frame if it is helpful.”
- 30 seconds: independent work time

Activity 2

🕒 10 min

Introduce 5-Frames, Add

Standards Alignments

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

The purpose of this activity is for students to learn stage 1 of the 5-Frames center. Students begin with 5 counters on a 5-frame and add more to this group. Then they find the total number of counters. The recording sheet is printed in the student book for this activity. There is a Introduction master available for students to use in future activities and lessons.

🌐 Access for English Learners

MLR8 Discussion Supports. Synthesis: Some students may benefit from the opportunity to rehearse what they will say with a partner before they share with the whole class. Before asking, “How many counters does Diego have altogether?” invite students to rehearse with a partner.

Advances: Speaking

Materials to Gather

Connecting cubes, Counters

Materials to Copy

Number Mat 1–5 (groups of 2)

Required Preparation

- Each group of 2 needs 1 connecting cube.

Student-facing Task Statement

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2.

Launch

- Groups of 2
- Give each group 1 connecting cube, 10 counters, and a number mat.
- “We are going to learn a new center called 5-frames.”
- Display a 5-frame filled with 5 counters.
- “For each round in this game, you will begin by filling the 5-frame at the top of your recording sheet. Then you will roll the cube onto the number mat to see how many

3.

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4.

5.

6.

Student Responses

Students add more counters to the full 5-frame and record the total number of counters with a number.

counters you will add. One partner rolls the cube and the other adds the counters."

- Invite a student to be your partner and roll the cube onto the number mat.
- "My partner rolled a 4 so I am going to add 4 more counters."
- Demonstrate adding counters under the 5-frame, with each additional counter lined up with the counters above.
- "Once you have added the counters, figure out the total number of counters and write the number on the recording sheet."
- Demonstrate counting to find the total and write the number 9 on the recording sheet.
- "Now you will play with your partner. Take turns rolling the cube and adding the counters."

Activity

- 5 minutes: partner work time

Synthesis

- Display a full 5-frame and 5 more counters.
- "What number did Diego roll? How many counters did he add to the 5-frame?"
- "How many counters does Diego have altogether?"
- "5 counters and 5 counters is 10 counters. 5 and 5 is 10."

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice adding with objects and images, writing numbers, and describing and building with shapes.

Students choose from any stage of previously introduced centers.

- 5-Frames
- Roll and Add
- Math Libs
- Match Mine

Materials to Gather

Materials from previous centers

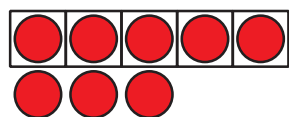
Required Preparation

- Gather materials from:
 - 5-Frames, Stage 1
 - Roll and Add, Stage 1
 - Math Libs, Stage 1
 - Match Mine, Stage 1

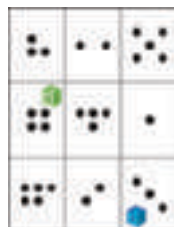
Student-facing Task Statement

Choose a center.

5-frames



Roll and Add

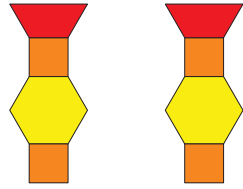


Math Libs

Match Mine

Launch

- “Today we are going to choose from centers we have already learned. You can also continue playing 5-frames.”
- 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

- "How did you choose which centers to participate in today? Will you choose different centers next time? Why or why not?"

Lesson Synthesis

🕒 5 min

Display a 5-frame with 5 counters.

"Today we used counters to add. I have 5 counters in my 5-frame and I need to add 3 more. Tell your partner what that means. What do I need to do?" (It means to put 3 more counters with the group of 5.)

Lesson 5: Subtract with Objects

Standards Alignments

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

Teacher-facing Learning Goals

- Use objects to show the action of subtraction.

Student-facing Learning Goals

- Let's use counters to subtract.

Lesson Purpose

The purpose of this lesson is for students to represent the action of subtraction with objects.

In previous lessons, students represented addition by putting 2 groups of objects together or adding more objects. In this lesson, students represent the action of subtraction with objects. Students take away a number of objects and determine the number of objects remaining. The language of “take away” and “**subtract**” is introduced by the teacher throughout the lesson. Students are not expected to produce this language in this lesson. The notation “____ take away ____” is also introduced. Students need time to see and hear the teacher use this language before they can understand expressions “____ - ____”, which are introduced in a later section.

This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

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

Materials to Copy

- Number Mat 1–5 (groups of 2): 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 evidence have students given that they understand the actions of addition and subtraction? What language do they use or associate with each operation?

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

⌚ 0 min

Unit 4, Section A Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Count to find the total or difference.
- Add or take away objects to represent addition and subtraction.

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

Warm-up

⌚ 10 min

How Many Do You See: Subtraction

Standards Alignments

Addressing K.CC

The purpose of this How Many Do You See is to allow students to subitize or use grouping strategies to describe the images they see (MP7). They may additionally make use of structure (MP7) because in successive images the arrangement of dots remains the same, but some dots are removed.

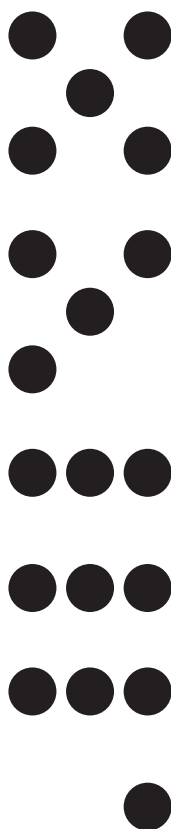
Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



Student Responses

Sample responses:

- 5: It looks like a dot cube.
- 4: There's 1 missing from the last picture.
- 6: There's 3 and 3.
- 4: There are 2 missing from the last picture.

Launch

- Groups of 2
- "How many dots do you see and how do you see them?"
- Flash image.
- 30 seconds: quiet think time

Activity

- Display image.
- 1 minute: partner discussion
- Record responses.
- Repeat for each image.

Synthesis

- Display the image with 6 dots and the image with 4 dots in the same configuration.
- "What changed from this group of dots to the next?" (Some of the dots were taken away.)
- "We have been working on adding objects. Today we are going to learn about how to **subtract**, or take away, objects."

Activity 1

 10 min

Subtract Counters

Standards Alignments

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

The purpose of this activity is for students to represent subtraction with objects. Students connect the action of subtraction with the language “take away.”

Access for English Learners

MLR8 Discussion Supports. Use multimodal examples. Count aloud and use exaggerated gestures to demonstrate the meaning of “take away.”

Advances: Listening, Representing

Materials to Gather

Counters

Student-facing Task Statement

- Count out 8 counters.
Take away 3 counters.

- Count out 10 counters.
Take away 6 counters.

- Count out 7 counters.
Take away 1 counter.

There are _____ counters left.

There are _____ counters left.

Launch

- Groups of 2
- Give each student at least 10 counters.
- “Count out 4 counters.”
- 30 seconds: independent work time
- “You have 4 counters. Now take away 2 of the counters.”
- 30 seconds: independent work time
- Write “4 take away 2.”
- “How many counters do you have now?” (2)
- 30 seconds: quiet think time
- Select a student to share what they did with the counters and how many counters they have left.
- “I’m going to write a 2 on the line. Now my sentence says ‘There are 2 counters left.’”

There are _____ counters left.

4. Count out 9 counters.
Take away 3 counters.

There are _____ counters left.

Student Responses

1. 5
2. 4
3. 6
4. 6

Activity

- Read each prompt to students. Pause between each line to give students time to count out and take away the counters and record the difference.
- As students work, ask:
 - "Which counters did you start with?"
 - "Which counters did you take away?"
 - "Which counters are left?"

Synthesis

- Display 6 counters.
- "I have 6 counters. I am going to take away 4 counters."
- Take away 4 counters.
- "6 take away 4 is 2."

Activity 2

🕒 10 min

Introduce 5-Frames, Subtract

Standards Alignments

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

The purpose of this activity is for students to learn stage 2 of the 5-frames center. Students represent subtraction with objects. Students begin with 5 counters on a 5-frame, take some counters away, and figure out how many counters are left.

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

Access for Students with Disabilities

Representation: Access for Perception. Synthesis: Students may benefit from demonstrating the concept of “5 take away 2.” Use 5-frames and counters to demonstrate the action of this so that students see how “5 take away 2” produces the final 3 counters in the 5-frame.

Supports accessibility for: Conceptual Processing, Visual-Spatial Processing

Materials to Gather

Connecting cubes, Counters

Materials to Copy

Number Mat 1–5 (groups of 2)

Required Preparation

- Each group of 2 needs 1 connecting cube.

Student-facing Task Statement

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1.

2.

3.

Launch

- Give each group 1 connecting cube, 10 counters, and a number mat.
- “We are going to learn a new way to do the 5-frames center. It is called 5-Frames, Subtract.”
- Display a 5-frame filled with 5 counters.
- “For each round in this game, you will begin by filling the 5-frame at the top of the recording sheet with counters. Then you will roll the cube onto the number mat to see how many counters you will take away. One partner rolls the cube and the other takes the counters away.”
- Demonstrate filling in the 5-frame with counters.
- Invite a student to be your partner and roll the cube onto the number mat.
- “My partner rolled a 3 so I am going to take away 3 counters.”
- Demonstrate taking away 3 counters and placing them to the side.
- “After you take away the counters, figure out how many counters are left and write the number on the recording sheet.”

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4.

5.

6.

Student Responses

Students take away counters from the full 5-frame and record the number of counters that are left.

- Write the number 2 on the recording sheet.
- "Now you will play with your partner. Take turns rolling the cube and taking away the counters."

Activity

- 5 minutes: partner work time

Synthesis

- Show a 5-frame with 3 counters.
- "How many counters did we start with?"
- "How many counters did we take away? How do you know?"
- Write and invite students to chorally repeat "5 take away 2."
- "How many counters do we have left?"
- Write "There are 3 counters left."

Activity 3

⌚ 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice adding and subtracting with objects and images, writing numbers, and describing and building with shapes.

Students choose from any stage of previously introduced centers.

- 5-Frames

- Roll and Add
- Math Libs
- Match Mine

Materials to Gather

Materials from previous centers

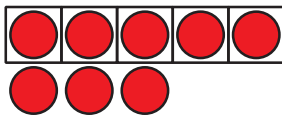
Required Preparation

- Gather materials from:
 - 5-Frames, Stages 1 and 2
 - Roll and Add, Stage 1
 - Math Libs, Stage 1
 - Match Mine, Stage 1

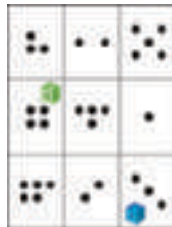
Student-facing Task Statement

Choose a center.

5-frames



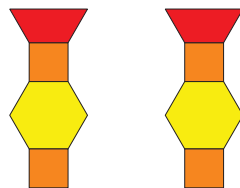
Roll and Add



Math Libs



Match Mine



Launch

- “Today we are going to choose from centers we have already learned. You can also continue playing 5-frames.”
- 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

- Display a full 5-frame.
- “Han is playing 5-Frames Subtract. He

rolled the cube and landed on 1. He says he has 6 counters now. What do you think?"

Lesson Synthesis

🕒 5 min

"Today we took away, or subtracted, with counters. How is subtracting different than adding?" (When you subtract, you are taking some things away. When you add, you are getting more things or putting things together. When you subtract, you have fewer things. When you add, you get more things.)

Student Section Summary

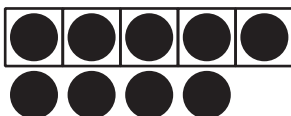
In this section, we counted two groups of things to figure out how many there are altogether.



3 yellow counters and 4 red counters is 7 counters.

3 and 4 is 7.

We added more things and found out how many there were altogether.



There were 5 counters on the 5-frame and we added 4 more counters.

5 and 4 is 9.

We subtracted, or took away, some things and figured out how many were left.



There were 5 counters on the 5-frame and we took away 2 of them.

5 take away 2 is 3.

Section B: Represent and Solve Story Problems

Lesson 6: Tell and Act Out Stories

Standards Alignments

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

Building Towards K.OA.A.1

Teacher-facing Learning Goals

- Act out a story.
- Tell a story based on a picture.

Student-facing Learning Goals

- Let's tell and act out stories.

Lesson Purpose

The purpose of this lesson is for students to tell and act out addition and subtraction stories.

In previous lessons, students demonstrated the actions of addition and subtraction with objects and counted to find the total or difference. This lesson introduces students to addition and subtraction in the context of a story, which will be explored throughout this section. The pictures and stories are about students playing at recess, which allows students to relate to and act out the stories directly and helps them understand the connection between what they act out and what happens in the story (MP2).

Because the focus of this activity is on making sense of the actions in the stories, there are no questions included. Questionless story problems encourage students to think about the context and the action in the story without feeling pressure or rushed to solve the problem.

Students may need to hear a story read aloud multiple times to remember what is happening in the story. While students may not be able to read the words in the story, it is important to have the story displayed for students to see so that students can begin to refer back to the problem when they recognize some of the numbers or words. Consider working on recognizing some common words in stories (many, more, how, now, etc.) during other parts of the day.

In this lesson and throughout the section, the teacher demonstrates writing expressions to represent the action in story problems. The teacher continues to use the language of "4 and 3" and "7 take away 5" and also reads expressions as "4 plus 3" and "7 minus 2."

Access for:**Students with Disabilities**

- Engagement (Activity 2)

**English Learners**

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

- Connecting cubes: Activity 3
- Materials from previous centers: Activity 3

Materials to Copy

- Number Mat 1–5 (groups of 2): Activity 3

Lesson Timeline

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

Teacher Reflection Question

As students worked in their small groups today, whose ideas were heard, valued, and accepted? How can you adjust the group structure tomorrow to ensure each student's ideas are a part of the collective learning?

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

⌚ 0 min

Unit 4, 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.

- Understand the action in a story problem and act it out or demonstrate it with objects or drawings.

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

Warm-up

🕒 10 min

How Many Do You See: Add To

Standards Alignments

Addressing K.OA.A.2

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 notice that dots are being added on with each image, they look for and make use of structure (MP7).

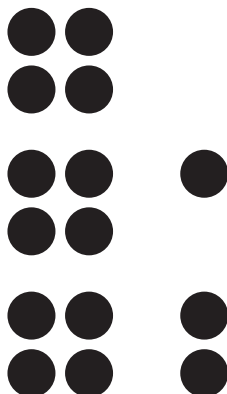
Instructional Routines

How Many Do You See?

Student-facing Task Statement

How many do you see?

How do you see them?



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.



Student Responses

Sample responses:

- 4: That looks like 4 on a dot cube.
- 5: There are 4 and 1 more.
- 6: There is 1 more than the last picture.
- 8: There are the same 4 dots and then 4 more dots.

- Repeat for each image.

Synthesis

- Display the first and third images.
- “What changed from the first group of dots to the third group of dots.” (2 more dots were added.)
- “The third group has 4 dots and 2 more dots. We can write that as ‘4 and 2’ or ‘4 + 2’.”

Activity 1

🕒 10 min

What is Happening?

Standards Alignments

Building Towards K.OA.A.1

The purpose of this activity is for students to create a story based on a picture. While students may notice and describe many details in the picture, the goal of the activity is for students to tell a story about the mathematical aspects of the picture. The picture allows for multiple interpretations and possible stories. For example, there may have been 5 students jumping rope and 2 students left or there could be 3 students jumping rope and 2 more students waiting for a turn. In the activity synthesis, the teacher writes a story based on a student’s interpretation of the picture.

Student-facing Task Statement



Launch

- Groups of 2
- “Look at this picture of children. Imagine what you think is happening in the picture. Tell your partner a story about what is happening in the picture.”
- 1 minute: quiet think time

Student Responses

Sample responses:

- 3 kids are jumping rope. 2 kids are waiting for a turn.
- 5 kids were jumping rope. 2 kids left to go play.

- 1 minutes: partner discussion
- Share responses.
- "Now tell a story that uses numbers to describe what is happening in the picture."

Activity

- 1 minute: quiet think time
- 3 minutes: partner discussion
- Share responses.
- Monitor for students who focus on mathematical details of the picture, such as the number of students.

Synthesis

- Demonstrate writing a story based on students' interpretation of the picture, such as: "There were 5 kids jumping rope. 2 students left to go play tag."
- "We can use numbers and symbols to show what happened in the story. We can write '5 take away 2' or ' $5 - 2$ '."
- "In the next activity, you will hear and act out a story like the one we just wrote."

Activity 2

🕒 15 min

Act Out a Story

Standards Alignments

Addressing K.OA.A.1

The purpose of this activity is for students to make sense of Add To and Take From stories by acting them out. The stories are about students at recess, so the context is accessible for students and easy to act out. The contexts can be adjusted to reflect the things that students like to do at

recess that are shared during the launch. Students act out the stories in small groups.

Access for English Learners

MLR8 Discussion Supports. Think aloud and use gestures to emphasize what's happening in the story. For example, use hand gestures to demonstrate 3 students leaving with the verbal description of the story "3 of the students had to go inside".

Advances: Listening, Representing

Access for Students with Disabilities

Engagement: Develop Effort and Persistence. Invite students to generate a list of shared expectations for group work. Ask students to share explicit examples of what those expectations would look like in this activity.

Supports accessibility for: Social-Emotional Functioning

Student-facing Task Statement

1. There were 4 students jumping rope at recess.
2 more students came out to play with them.
2. There were 6 students playing soccer at recess.
3 of the students had to go inside.



Student Responses

Students act out the stories.

Launch

- Groups of 6
- "What do you like to play at recess?"
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.
- "Work with your partner to act out one thing that you like to do at recess."
- 3 minutes: partner work time
- "Now we are going to hear and act out some stories about students playing at recess. Close your eyes and picture what is happening in the story."
- Display and read the story about students jumping rope.
- 30 seconds: independent think time
- "Tell your partner what happened in the story."
- Monitor for students who accurately retell the story. Choose at least one student to share with the class.

Activity

- “Now you will get to act out the story in your groups.”
- Assign groups to different parts of the room. Read the story again as students act out the story.
- If needed, ask “How can you show that there were 4 students jumping rope?” and “How can you show that 2 more came out to play with them?”
- 5 minutes: small-group work time
- Repeat the steps with the story about students playing soccer.

Synthesis

- Reread the story about students playing soccer.
- “What did you do first to act out this story?” (First we acted like we were all playing soccer.)
- “What did you do next to act out this story?” (Then 3 people walked away.)
- “How did you know that 3 people should leave the group?” (Because in the story, 3 of the kids had to go inside.)
- “The words in a story help us figure out what is happening. We can use numbers and symbols to show what happened in the story. We can write ‘6 take away 3’ or ‘ $6 - 3$.’”

Advancing Student Thinking

If students retell the the first part of the story but not the action, consider asking:

- “Tell me about what happened in the story.”
- Reread the story and ask “6 students were playing soccer at recess. What happened next?”

Activity 3

🕒 20 min

Introduce Subtraction Towers, Objects

Standards Alignments

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

The purpose of this activity is for students to learn stage 1 of the Subtraction Towers center activity. Students build a tower, roll to determine how many cubes to subtract, and count to determine how many cubes are left.

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

- 5-frames
- Build Shapes
- Counting Collections

Materials to Gather

Connecting cubes, Materials from previous centers

Materials to Copy

Number Mat 1–5 (groups of 2)

Required Preparation

- Each group of 2 needs 10 connecting cubes.
- Gather materials from:
 - 5-frames, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Counting Collections, Stage 1

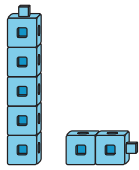
Student-facing Task Statement

Choose a center.

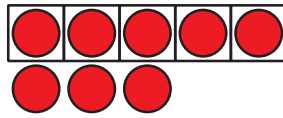
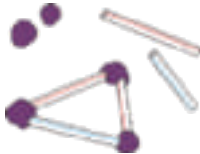
Subtraction Towers 5-frames

Launch

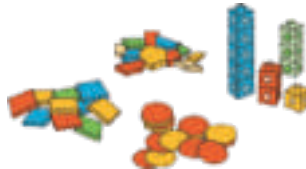
- Groups of 2
- Give each group of students 10 connecting cubes and a number mat.
- “We are going to learn a center called Subtraction Towers.”



Build Shapes



Counting Collections



- Display a connecting cube tower with 7 cubes.
- "How many cubes are in the tower?"
- 30 seconds: quiet think time
- Share responses.
- "If I have to subtract, or take away, 3 cubes from my tower, what should I do?" (Break off 3 cubes, take off 1 cube at a time as you count.)
- "One partner uses up 5-10 cubes to build a tower. Then the other partner rolls to figure out how many cubes to take away, or subtract, from the tower. Then work together to figure out how many cubes are left in the tower. Take turns building the tower."

Activity

- 8 minutes: partner work time
- "Now you can choose another center. You can also continue playing Subtraction Towers."
- Display the center choices in the student book.
- Invite students to work at the center of their choice.
- 8 minutes: center work time
- If time, invite students to choose another center.

Synthesis

- "Which center is most challenging for you? What makes it challenging?"

Lesson Synthesis

🕒 5 min

"Today we heard and acted out stories about playing at recess."

"7 students were climbing on the jungle gym. 3 of the students left to go jump rope instead."

"How would you act out this story?" (7 of us would stand together and then 3 of us would leave.)

Lesson 7: Use Objects to Represent Stories

Standards Alignments

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

Teacher-facing Learning Goals

- Represent addition and subtraction stories with objects.

Student-facing Learning Goals

- Let's use objects to show what is happening in the story.

Lesson Purpose

The purpose of this lesson is for students to use objects to demonstrate the actions of addition and subtraction in stories.

In a previous lesson, students told and acted out stories. Representing a story with objects may be more difficult because students have to understand the connection between the physical objects and the objects in the story. To assist students in making this connection, the first activity begins with the teacher acting out the story with representations of people such as toys or dolls and then transitions into students using counters.

Throughout the lesson, students should identify what the counters represent, based on the context of the story. The purpose of the lesson synthesis is to discuss how to use objects to represent addition and subtraction in a story (MP2).

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

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

Materials to Copy

- Playing On the Playground (groups of 30): Activity 1
- Math Stories Stage 2 Backgrounds (groups

of 6): Activity 3

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 students used objects to represent stories, what evidence did you see that students are making connections between the objects and the things in the story that the objects are representing?

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

🕒 0 min

Unit 4, 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.
- Understand the action in a story problem and act it out or demonstrate it with objects or drawings.
- Use objects or drawings to represent a story problem.

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

Warm-up

🕒 10 min

Notice and Wonder: Balls and Counters

Standards Alignments

Building Towards K.OA.A.1

The purpose of this warm-up is to elicit the idea that counters can be used to represent objects, which will be useful when students use counters to represent the objects in stories and story problems in a later activity (MP2). While students may notice and wonder many things about these images, the connections between the image and the counters are the important discussion points. Actual two-color counters can be shown along with the image of the balls, rather than the provided image of two-color counters.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?



Student Responses

Students may notice:

- There are some basketballs and some soccer balls.
- Some of the balls are orange and some are black and white.
- There are 3 basketballs. There are 2 soccer balls.
- There are red and yellow counters.

Students may wonder:

- How many balls are there?
- Are there any baseballs?
- What do the counters mean?

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

- "Why do you think that 3 of the counters are red and 2 of the counters are yellow?" (To show the 3 basketballs and 2 soccer balls.)
- "We can use counters to show what is happening in a picture or story. There are 3 basketballs and 2 soccer balls. We can write that as '3 and 2' or ' $3 + 2$ '."
- "Soccer balls and basketballs are things that some students play with at recess. What are some things that you like to play with at recess?"

Activity 1

🕒 15 min

Playing on the Playground

Standards Alignments

Addressing K.OA.A.1

The purpose of this activity is for students to use math tools to represent objects and actions in a story (MP2). The purpose of the activity synthesis is to connect two-color counters to the objects in the story.

Materials to Gather

Two-color counters

Materials to Copy

Playing On the Playground (groups of 30)

Required Preparation

- 7 objects that represent people are needed, such as plastic toys or dolls. There are also images of people that can be cut out of the provided black line master.
- The playground work mat is printed in the student workbook and is also included in the black line master.
- Each student needs a bag of 10 two-color counters.

Student-facing Task Statement

1. There were 5 students playing basketball at recess.
2 of the students went inside to get some water.
2. There were 3 students playing on the swings at recess.
1 more student came over to play on the swings.
3. There were 5 students playing tag at recess.
4 of the students went inside.

Launch

- Display the people and the playground work mat for all to see.
- Read the first problem, demonstrating the action in the story by moving the people onto and off of the playground mat.
- “I want all of you to act out the stories with me. We don’t have enough people. What else could you use to represent the people in the story?” (Students may suggest two-color counters, connecting cubes, or other materials.)
- Give each student a bag with 10 two-color counters.



Student Responses

Students move the correct number of counters onto the mat to represent addition and off the mat to represent subtraction.

- "Use your counters to show what is happening in each story."

Activity

- Read each story. As students demonstrate the actions with counters, ask:
 - "How did you show that some of the students went inside to get some water?" (I took some counters off of the mat.)
 - "How did you know to push some counters off your mat?" (Because in the story, some of the students went inside to get water.)
 - "Show your partner which students are playing basketball." (Students point to the counters on the mat.)
 - "Show your partner which students went inside." (Students point to the counters off the mat.)
 - "Use your counters to show your partner what just happened in the story."
- Repeat with each problem, varying the prompts as needed by the story.

Synthesis

- "What does each of your counters represent?" (a person, a student)
- "I used people to show what happened to the students at recess, but we can also use math tools like counters to represent the students."

Activity 2

Finish the Story

🕒 10 min

Standards Alignments

Addressing K.OA.A.1

The purpose of this activity is for students to create stories and relate the action in the stories to the action of adding or taking away counters. While in the first activity, the story was provided, in this activity students create the action in the story, which is an opportunity to hear what language students associate with addition and subtraction (MP6). Mats with pictures of each setting are provided to help students make connections between what they do with their cubes and what is happening in the story. The goal of the activity synthesis is to relate the action in the story to the action with counters and show students expressions that represent these actions (MP2).

Access for English Learners

MLR8 Discussion Supports. Synthesis: Provide all students with an opportunity to produce these words and numbers by inviting students to chorally repeat the expression in unison 1-2 times. For example: “7 take away 3” and “ $7 - 3$ ”.

Advances: Listening, Speaking

Access for Students with Disabilities

Representation: Internalize Comprehension. Synthesis: First demonstrate, then invite students to name each action they take as they tell their stories. For example, “Four ducks are swimming in a lake. Two ducks fly away. When the ducks fly away, I take away 2 counters.”

Supports accessibility for: Conceptual Processing, Organization

Materials to Gather

Two-color counters

Student-facing Task Statement

1. There were 7 kids playing tag on the field.

Launch

- Groups of 2
- “We have heard and acted out some stories about students playing at school. Where else in your community do you see people playing outside? Describe it to your partner.”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.



2. There were 2 kids eating at the picnic table.



3. There were 4 ducks swimming in the lake.



4. There were 5 kids playing hopscotch.

- Display images from the student book.
- “Some of the places where we play and walk around outside are parks and playgrounds. These stories all take place in different parks and playgrounds. How are these pictures the same as parks and playground that you have been to? How are they different?”
- Give each student a bag of 10 two-color counters.
- “We’re going to use our counters to show what is happening in our stories, but this time, the stories aren’t finished yet.”

Activity

- Display the student workbook page of a field and read the first question. Count out 7 counters and place them on the field.
- “I’ve got 7 kids playing tag in the field. What do you think happens next in the story?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Choose one student response and demonstrate the action with the counters.
- “Now it’s your turn. I’m going to read you the first part of the story. Your job is to think about what happens next in the story. Then tell the story to your partner and show them what happens with your counters.”
- Read each question. Give students quiet think time and partner discussion time for each question.

Synthesis

- For each question, choose a student to share their story and demonstrate what happens with their counters. Record the action with words and numbers and an



Student Responses

Students move their counters to represent what happens in the story.

expression. For example: “7 take away 3” and “ $7 - 3$ ”.

- As each student shares, ask: “What do the counters represent?”

Advancing Student Thinking

If students represent the given sentence with counters but need encouragement to make up the rest of the story, consider asking:

- “Can you use your counters to show me what happened first in the story?”
- “What do you think happened next? Do you think more kids came to play tag or do you think some kids went home?”

Activity 3

🕒 20 min

Introduce Math Stories, Act It Out

Standards Alignments

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

The purpose of this activity is for students to learn stage 2 of the Math Stories center. Students use two-color counters to act out and tell stories involving addition or subtraction with the background mats (MP2). Students are not expected to develop story problems with questions or record using drawings or numbers at this point. In a future variation of this center, students will

tell, represent, and solve story problems.

After the new center is introduced, students choose at least 1 other center activity.

- Subtraction Towers
- 5-frames
- Build Shapes
- Counting Collections

Materials to Gather

Materials from previous centers, Two-color counters

Materials to Copy

Math Stories Stage 2 Backgrounds (groups of 6)

Required Preparation

- Each group of 2 needs 10 two-color counters.
- Materials from previous centers:
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Counting Collections, Stage 1

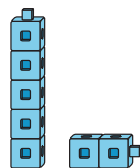
Student-facing Task Statement

Choose a center.

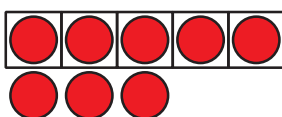
Math Stories



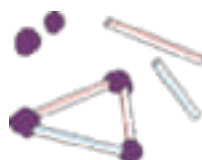
Subtraction Towers



5-frames



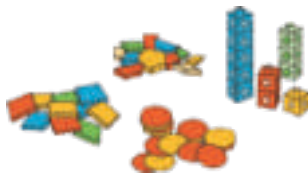
Build Shapes



Launch

- Groups of 2
- Give each group of students 10 counters and a set of background mats.
- “We are going to learn a new way to do the Math Stories center. It is called Math Stories, Act It Out.”
- Display some counters and the background mat with the picnic tables.
- “I need to make up a story using this background mat. What could I pretend my counters are?” (People sitting at the picnic tables.)
- 30 seconds: quiet think time
- Share responses.

Counting Collections



- “These counters are people sitting at the picnic tables. My story is that there were 6 people eating lunch at the picnic table.”
- Demonstrate placing 6 counters on the picnic table.
- “But now I need to add or take away something in my story. What should happen next in the story?” If needed, ask “Should more people come over to the picnic table or should some people leave?”
- Demonstrate acting out the story with counters based on student responses.
- “One partner is going to think of a story to go with the background mat. The other partner is going to use the counters to act out what happened in the story. Take turns making up stories and using counters.”

Activity

- 5 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 a student to share a story involving addition.
- Invite a student to share a story involving subtraction.
- As each student shares, record the action with words and numbers and an expression. For example: “5 take away 2” and “ $5 - 2$ ”.

Lesson Synthesis

 5 min

"Today we used math tools like counters to show the things in a story."

Reread the first problem from the activity in which students finish the stories, and display 7 counters.

"7 kids are playing tag on the field."

"Mai said that 2 kids left to eat a snack. How can I show that with my counters?" (Take away 2 counters.)

Display 7 counters.

"Diego said that 3 more kids came over to join the game of tag. How can I show that with my counters?" (Add 3 more counters.)

Lesson 8: Represent and Solve Story Problems

Standards Alignments

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

Teacher-facing Learning Goals

- Represent and solve Add To, Result Unknown and Take From, Result Unknown story problems in a way that makes sense to them.

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 represent and solve story problems in a way that makes sense to them.

In previous lessons, students made sense of and acted out stories. This is the first lesson where students are introduced to story problems that include a question. In the first activity, students develop questions to go with stories. In the second activity, students represent a story problem and discuss how to solve the story problem. Students may use objects, math tools, or drawings to represent and solve the story problem (MP5).

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Act It Out (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 2
- 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

If you were to teach this lesson over again, which activity would you redo? How would your proposed changes support student learning?

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

🕒 0 min

Unit 4, 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.
- Understand the action in a story problem and act it out or demonstrate it with objects or drawings.
- Use objects or drawings to represent a story problem.

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

Warm-up

🕒 10 min

Act It Out: Birds in a Fountain

Standards Alignments

Addressing K.OA.A.1

Building Towards 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 represent and solve story problems in a later activity.

Instructional Routines

Act It Out

Student-facing Task Statement

8 birds were splashing in the fountain.

3 of the birds flew away.

How can you act out this story?



Student Responses

Sample responses:

- We can pretend to be birds in a fountain and have 3 people pretend to fly away.
- We can use counters to show the birds that are in the fountain and then take away 3 to show that they flew away.
- We can draw a picture with birds in a fountain and cross out the birds that fly away.

Launch

- Groups of 2
- 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.

Synthesis

- “In the next activity, we will hear more stories and ask questions at the end of the stories.”

Activity 1

🕒 10 min

Questionless Story Problems

Standards Alignments

Building Towards K.OA.A.2

The purpose of this activity is for students to develop questions to ask about stories.

🌐 Access for English Learners

MLR8 Discussion Supports. Think aloud and use gestures to emphasize what’s happening in the story. For example, use hand gestures to demonstrate birds flying away with the verbal description of the story “3 of the birds flew away.”

Advances: Listening, Representing

Student-facing Task Statement

1. 8 birds were splashing in the fountain.
3 of the birds flew away.
2. Priya planted 6 flowers in the neighborhood garden at the park.
Diego planted 3 more flowers in the garden.

Student Responses

Sample responses:

1. How many birds are in the fountain now?
Why did some of the birds fly away?
2. How many flowers are in the garden now?
What kind of flowers did they plant?

Launch

- Groups of 2
- Read and display the first story.
- “Close your eyes and picture what is happening in the story.”
- 30 seconds: quiet think time
- “Tell your partner what happened in the story.”
- 1 minute: partner discussion
- “What questions can we ask at the end of the story?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.

Activity

- Repeat the steps with the second story.

Synthesis

- Read each story with a question that students shared at the end. For example, "Priya planted 6 flowers in the garden. Diego planted 3 more flowers in the garden. How many flowers are in the garden now?"
- For each story, record the action with words and numbers and an expression. For example: "6 and 3" and " $6 + 3$ ".
- "There are questions at the end of our stories. In the next activity, we'll get to figure out the answers to the questions."

Activity 2

🕒 10 min

From a Story to a Story Problem

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is to understand and solve an Add To, Result Unknown story problem. This is the first time students are asked to solve a story problem, so it is important that they retell and understand the story before they try to answer the question. Crayons are an intentional choice in this activity so that students can literally act out the story. Students also have access to connecting cubes and two-color counters which they may choose to use to represent the story (MP2, MP5).

🕒 Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Some students may benefit from using 5-frames to help count the total number of crayons. Give students access to 5-frames to figure out how many total crayons Noah has.

Supports accessibility for: Organization, Conceptual Processing

Materials to Gather

Connecting cubes or two-color counters,
Crayons

Student-facing Task Statement

Noah had 5 crayons.

Jada gave Noah 4 more crayons.

How many crayons does Noah have now?

Student Responses

9 crayons. Students may use crayons to represent the story or math tools such as connecting cubes or counters. Students may also draw a picture.

Launch

- Groups of 2
- Give students access to two-color counters, connecting cubes, and crayons.
- 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 objects, drawings, numbers, or words."

Activity

- 3 minutes: independent work time

Synthesis

- "What are we trying to figure out?" (How many crayons does Noah have now?)
- "How did you figure out the answer to the question?" (I counted all of the crayons. I counted all of the counters.)
- "Noah had 5 crayons and then Jada gave him 4 more crayons. We can write that as '5 and 4' or ' $5 + 4$ '. 5 and 4 is 9."

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with addition and subtraction, as well as describing and building shapes. Students choose from centers introduced in previous lessons and previous units.

- Math Stories
- Subtraction Towers
- 5-frames
- Build Shapes
- Counting Collections

Students will continue to choose from these centers in upcoming lessons. Keep the materials from each center organized to use each day.

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from
 - Math Stories, Stages 1 and 2
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Counting Collections, Stage 1

Student-facing Task Statement

Choose a center.

Math Stories

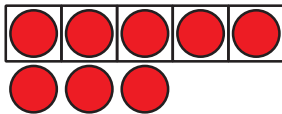
Subtraction Towers

Launch

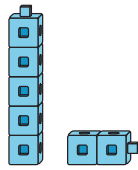
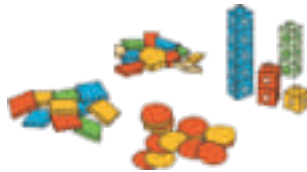
- Groups of 2
- “Today we are going to choose from centers that we learned previously.”
- Display center choices on student page.
- “Think about what you would like to do first.”
- 30 seconds: quiet think time



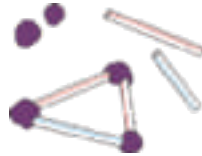
5-frames



Counting Collections



Build Shapes



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 choose Math Stories during centers, what do you do first with your partner? What do you do next?"

Lesson Synthesis

🕒 5 min

"Noah had 5 crayons. Jada gave Noah 4 more crayons. How many crayons does Noah have now?"

Display 5 counters and 4 counters.

"Kiran took out 5 counters because Noah had 5 crayons. Then he took out 4 counters because Jada gave him 4 more crayons. Has Kiran answered the question? What does he need to do to answer the question?" (He needs to count all of the counters.)

"What do the counters show from the story?" (Crayons.)

Lesson 9: Solve Story Problems

Standards Alignments

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

Teacher-facing Learning Goals

- Solve Add To, Result Unknown and Take From, Result Unknown story problems, including problems with a result of 0.

Student-facing Learning Goals

- Let's look at different ways to show what happened in a story problem.

Lesson Purpose

The purpose of this lesson is for students to solve story problems in a way that makes sense to them and to understand how objects and drawings represent a story problem.

In a previous lesson, students were introduced to story problems with questions. In this lesson, students represent and solve the story problems. They may use objects, math tools, or drawings. Students explain how both objects and drawings show what is happening in a story problem, which will be useful as students create their own representations and interpret other representations in future lessons.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 2)

Instructional Routines

How Many Do You See? (Warm-up)

Materials to Gather

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

Materials to Copy

- Math Fingers 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

Which students had opportunities to share their work and thinking during whole-class discussion? How did you select these students?

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

⌚ 0 min

Unit 4, 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.
- Understand the action in a story problem and act it out or demonstrate it with objects or drawings.
- Use objects or drawings to represent a story problem.
- Explain how objects or drawings represent a story problem.

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

Warm-up

⌚ 10 min

How Many Do You See: Finger Addition

The purpose of this How Many Do You See is to allow students to use subitizing or grouping strategies to describe the images they see.

Instructional Routines

How Many Do You See?

Student-facing Task Statement

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



Student Responses

Sample responses:

- 2: I see fingers.
- 4: There are 2 fingers and 2 fingers.
- 3: I just see 3 fingers.
- 5: 3 and 2 more is 5.

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 image with four fingers held up.
- "How many fingers are on each hand?" (2 fingers)
- "How many fingers are there together?" (4 fingers)
- "2 and 2 is 4. We can also write that as $2 + 2$."

Activity 1

🕒 10 min

Markers at School

👤 ↔ 👤 PLC Activity

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to represent and solve an Add To, Result Unknown story problem. In the synthesis, students explain how they represented the story with different objects (MP2).

Materials to Gather

Connecting cubes or two-color counters,
Markers

Student-facing Task Statement

There were 4 markers at school.

Elena brought 3 more markers to school.

How many markers are at school now?

.....

Student Responses

7 markers.

Sample responses:

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

Launch

- Groups of 2
- Give students access to two-color counters, connecting cubes, and markers.
- 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: quiet work time
- 2 minutes: partner discussion

- Monitor for a student who uses markers to solve the problem. Monitor for a student who uses counters or connecting cubes to solve the problem.

Synthesis

- Invite a student who used markers to share.
- "How do the markers show what happened in the story?"
- Invite a student who used counters or connecting cubes to share.
- "How do the counters show what happened in the story?" (Those counters show the markers that were at school. Those counters show the markers that Elena brought to school.)
- "There were 4 markers and Elena brought 3 more markers. 4 markers and 3 markers is 7 markers. We can write that as '4 and 3' or ' $4 + 3$ '."

Advancing Student Thinking

If students take out more or fewer than 7 markers or counters, consider asking:

- "Can you use your markers/counters to tell me what happened in the story?"
- "There were 4 markers at school. Which markers/counters show the 4 markers that were at school? Which markers/counters show the 3 more markers that Elena brought to school?"

Activity 2

 10 min

Balls at Recess

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to interpret how a drawing represents a story problem (MP2). Students solve a Take From, Result Unknown story problem. Because balls are the objects in the story problem, it may be easier to relate the circles in a picture to the balls in the story. Students are introduced to the number 0 in the activity synthesis.

Access for English Learners

MLR8 Discussion Supports. Synthesis: Pair verbal descriptions with gestures by pointing to the number 0 to clarify the meaning of similar terms or phrases such as “none” or “there are no balls left.”

Advances: Listening, Representing

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Support student understanding of the situation by acting out the removing of the balls Diego took inside. In addition to crossing out the circles, students may also benefit from seeing the 5 counters and having 5 of them removed.

Supports accessibility for: Conceptual Processing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement



There were 5 balls on the playground.

Launch

- Groups of 2
- Give students access to two-color counters or connecting cubes.
- 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.

Diego brought 5 of the balls inside.

How many balls are on the playground now?

Student Responses

0 balls.

Sample responses:

Students use math tools such as connecting cubes or counters to represent the story.

Students draw a picture.

- “Show your thinking using drawings, numbers, words, or objects.”

Activity

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

Synthesis

- Draw 5 circles in a line with 5 of them crossed out, as pictured:



- “Lin drew this picture. How does this picture show what happened in the story?”
- If needed, ask “Where do you see 5 balls that are on the playground in the picture?” and “Why are 5 of the circles crossed out?”
- “How many balls are on the playground now?” (None, zero.)
- “There are no balls left on the playground. There are 0.”
- Demonstrate writing the number 0.
- “There were 5 balls on the playground and Diego brought 5 of the balls inside. We can write that as ‘5 take away 5’ or ‘ $5 - 5$ ’. 5 take away 5 is 0.”

Activity 3

🕒 25 min

Introduce Math Fingers, Add 2 Hands

Standards Alignments

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

The purpose of this activity is for students to learn stage 3 of the Math Fingers center. Students each hold up some fingers on one hand and work with their partner to figure out how many fingers they are holding up together. Students color the fingers on the recording sheet and write a number to show how many fingers there are altogether. The recording sheet can be laminated or in a sheet protector so it can be used multiple times by students.

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

- Math Stories
- Subtraction Towers
- 5-frames
- Build Shapes
- Counting Collections

Materials to Gather

Materials from previous centers

Materials to Copy

Math Fingers Stage 3 Recording Sheet (groups of 1)

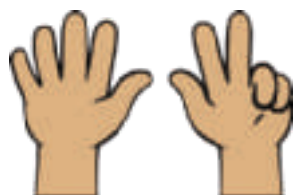
Required Preparation

- Gather materials from:
 - Math Stories, Stages 1 and 2
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2
 - Build Shapes, Stages 1 and 2
 - Counting Collections, Stage 1

Student-facing Task Statement

Choose a center.

Math Fingers



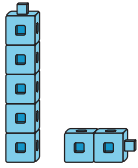
Math Stories



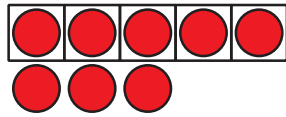
Launch

- Groups of 2
- Give each student a recording sheet.
- “We are going to learn a new way to do the Math Fingers center. It is called Math Fingers, Add 2 Hands.”
- “My partner and I will each hold up some fingers on 1 hand.”
- Hold up 3 fingers on 1 hand. Choose a student to hold up 2 fingers on 1 hand.

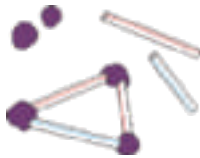
Subtraction Towers



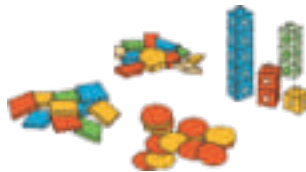
5-frames



Build Shapes



Counting Collections



- “Now we have to figure out how many fingers we are holding up altogether. How can we figure it out?” (You can count the fingers. You can put your fingers together. You can look and see that it’s 3 and 2, which is 5.)
- Display math fingers recording sheet.
- “Now we each need to fill out our recording sheet. First we color the fingers to show which fingers we were holding up. Then we write a number to show how many fingers we held up on each hand.”
- “What number do you think we write at the bottom of the page?” (How many fingers you held up altogether.)
- “It’s your turn to play with your partner. Put 1 hand behind your back. Count to 3. When it gets to 3, hold up some of your fingers on 1 hand.”

Activity

- 8 minutes: partner work time
- “Now you can choose another center. You can also continue playing Math Fingers.”
- 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

- “Was there a time when you didn’t need to count the fingers to figure out how many fingers you and your partner held up together? How did you know how many fingers there were?” (I could just see that I had 2 fingers and my partner had 2 fingers. I know that 2 and 2 is 4. I only had 1 finger up and my partner had 3 fingers up. I know

that 3 and 1 more is 4.)

Lesson Synthesis

🕒 5 min

Reread the story problem from the second activity.

"Tyler used counters to show what happened in the story."
Display 5 counters and demonstrate moving 5 to the side.

"Jada drew a picture to show what happened in the story."
Draw and display 5 circles in a line with 5 crossed out.



"What is the same about how they showed the story? What is different?"

Lesson 10: Compare Drawings

Standards Alignments

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

Teacher-facing Learning Goals

- Compare drawings that represent story problems.
- Solve Add To, Result Unknown and Take From, Result Unknown story problems.

Student-facing Learning Goals

- Let's figure out how drawings can show what is happening in a story problem.

Lesson Purpose

The purpose of this lesson is for students to compare drawings that represent story problems.

In a previous lesson, students solved Add To and Take From, Result Unknown story problems and explained how both objects and drawings represented the story. In this lesson, students solve story problems and compare how different drawings represent the story. Students interpret both drawings that correctly and incorrectly represent the story problem, as well as unorganized and organized drawings. While students are not expected to produce a drawing to represent and solve a story problem in this lesson, students make sense of various drawings, which will help them be prepared to create drawings in a future lesson. The purpose of the lesson synthesis is for students to discuss how it can be easier to see what happens in the story problem in an organized drawing.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Warm-up)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

- Connecting cubes or two-color counters: Activity 1
- Connecting cubes: Activity 3

Materials to Copy

- Questions About Us Chart 5-Frame Template (groups of 1): Warm-up
- Bingo Stages 1-3 Gameboard (groups of 4): Activity 3

- Materials from previous centers: Activity 3
- Two-color counters: Activity 3
- Dot Mat 1-5 (dots and 5-frames) (groups of 2): 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

In the next lesson, all students will be asked to produce a drawing to represent and solve a story problem. How does the work in this lesson and previous lessons lay the foundation for students to create their own drawings?

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

🕒 0 min

Unit 4, 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

Questions About Us: Pets?

Standards Alignments

Addressing K.CC.B.5

The purpose of this warm-up is for students to consider concepts of number in a familiar context. Students may use the structure of the chart and the 5-frames to determine how many students made each choice (MP7). Students have an opportunity to hear and practice the count sequence. Adjust the context and choose a different question with 3 possible responses to better reflect students' interests and experiences as needed.

Access for English Learners

MLR8 Discussion Supports. Display an image or drawing of each type of pet above the corresponding 5-frame. Invite students to respond to the question using the sentence frame, "My favorite pet is a . . ."
Advances: Speaking, Representing.

Instructional Routines

Questions About Us

Materials to Copy

Questions About Us Chart 5-Frame Template
(groups of 1)

Required Preparation

- Cut out enough 5-frames to make a chart with a space for each student to answer the survey question.

Student Responses

Students count to determine how many students chose each pet.

Launch

- Groups of 2
- Display Questions About Us chart.
- "Which pet is your favorite: dogs, cats, or rabbits?"
- 30 seconds: quiet think time
- Record each student's choice with a circle in a 5-frame.

Activity

- "How can we figure out how many students chose dogs?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion

- Share responses.
- Demonstrate or invite students to demonstrate counting.
- "How many students chose dogs?"
- "How many students chose cats?"
- 30 seconds: quiet think time
- Share responses.
- "How many students chose rabbits?"
- 30 seconds: quiet think time
- Share responses.

Synthesis

- "What was different about the question that we answered today?" (There were 3 choices instead of 2.)

Activity 1

🕒 10 min

Apple Slices for a Picnic

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to solve Add To, Result Unknown story problems. In the synthesis, students determine which drawing shows what happens in the story problem (MP2).

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Launch

- Groups of 2
- Give students access to connecting cubes or two-color counters.



There were 3 apple slices at the picnic.

Tyler's dad brought 5 more apple slices to the picnic.

How many apples slices are there now?

Student Responses

8 apple slices

Sample responses:

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

- Display image.
- "What do you notice? What do you wonder?" (There are 3 people. They are having a picnic. There are sandwiches.)
- 30 seconds: quiet think time
- Share responses.
- "Have you ever had a picnic in the park? What kinds of things did you bring to the picnic?"
- 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

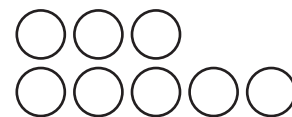
- 2 minutes: independent work time
- 2 minutes: partner discussion

Synthesis

- Draw and display 5 apple slices.



- Draw and display 3 circles and 5 circles.



- "Which drawing shows what happens in the story? How do you know?" (The circles show what happened in the story. First

there were 3 apples slices and then Tyler's dad brought 5 more apple slices.)

- "There were 3 apple slices at the picnic. Then Tyler's dad brought 5 more apples slides to the picnics. 3 apple slices and 5 apple slices is 8 apple slices. We can write that as '3 and 5' or ' $3 + 5$ '."

Advancing Student Thinking

If students take out more or fewer than 8 counters or other math tools, consider asking:

- "Can you use your counters to tell me what happened in the story?"
- "There were 3 apple slices at the picnic. Which counters show the 3 apple slices that were at the picnic? Which counters show the 5 more apple slices that Tyler's dad brought to the picnic?"

Activity 2

🕒 10 min

Compare Drawings

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to compare two drawings that represent the story problem in the previous activity. Students notice that it can be easier to see how an organized representation connects to the story problem (MP6).

♿ Access for Students with Disabilities

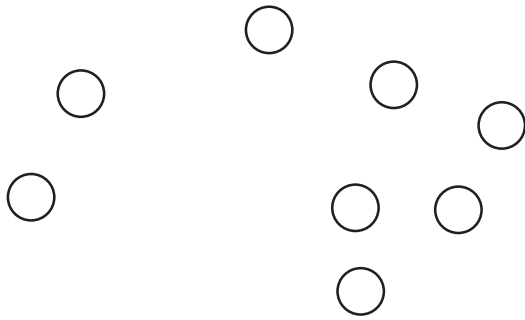
Representation: Access for Perception. Make connections between representations visible. Use gestures or add details to the display (different colors or markings) to show how each drawing shows what happened in the story.

Supports accessibility for: Organization, Visual-Spatial Processing

Student-facing Task Statement

Andre and Noah both drew pictures to show what happened in the story problem.

Andre



Noah



Student Responses

Answers vary.

Launch

- Groups of 2
- “Andre and Noah both drew pictures to show what happened in the story problem.”
- If needed, reread the story problem from the previous activity:
- “There were 3 apple slices at the picnic. Tyler’s dad brought 5 more apple slices to the picnic. How many apples slices are there now?”

Activity

- Display Andre’s representation.
- “How does Andre’s drawing show what happened in the story?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Display Noah’s representation.
- “How does Noah’s drawing show what happened in the story?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- If needed, ask “Why do you think Noah drew a line in the middle of his circles?”

Synthesis

- Display both representations.
- “What is the same about Andre and Noah’s drawings?” (They both show 8 circles. They both show 3 apple slices and 5 more apple slices.)
- “What is different about Andre and Noah’s drawings?” (Andre’s circles are messy. Noah’s are in a line. It’s easier to see the 3 apple slices and the 5 apple slices in Noah’s

drawing. Noah's drawing is easier to count.)

Activity 3

🕒 25 min

Introduce Bingo, Add and Cover

Standards Alignments

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

The purpose of this activity is to introduce students to stage 3 of the Bingo center. Students roll 2 cubes onto a dot mat and count to determine the total number of dots. Students place a counter on any squares that show the same total.

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

- Math Fingers
- Math Stories
- Subtraction Towers
- 5-frames
- Counting Collections

Materials to Gather

Connecting cubes, Materials from previous centers, 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)

Required Preparation

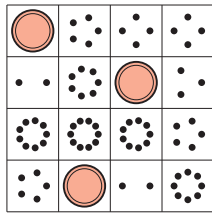
- Each group of 4 students needs 2 connecting cubes.
- Gather materials from:
 - Math Fingers, Stages 1-3
 - Math Stories, Stages 1 and 2
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2

○ Counting Collections, Stage 1

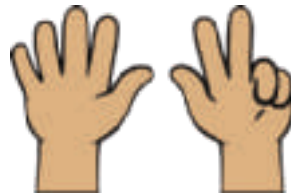
Student-facing Task Statement

Choose a center.

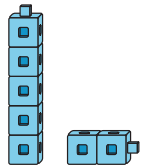
Bingo



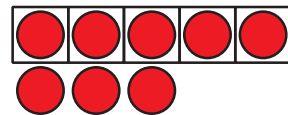
Math Fingers



Subtraction Towers



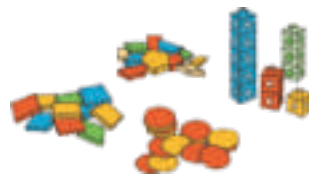
5-frames



Math Stories



Counting Collections



Launch

- Groups of 4
- Give each group of students 2 connecting cubes, two-color counters, and a dot mat. Give each student a gameboard.
- “We are going to learn a new way to do the Bingo center. It is called Bingo, Add and Cover.”
- Display a dot mat 1-5.
- “I’m going to roll 2 cubes onto the mat. Then I need to figure out how many dots I have altogether.”
- Demonstrate rolling 2 cubes onto the mat.
- “How can I figure out how many dots I have altogether?” (You can count all of the dots. You can just see that there are 2 and 2, which is 4.)
- Display gameboard.
- “I have 4 dots altogether. Now I need to cover all of the squares on my gameboard that also have 4 things. Which squares should I cover?”
- “Take turns rolling the cubes onto the mat, then each person covers the squares on their mat. The game ends when someone has 4 counters in a row.”

Activity

- 8 minutes: partner work time
- “Now you can choose another center. You can also continue playing Bingo.”
- 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

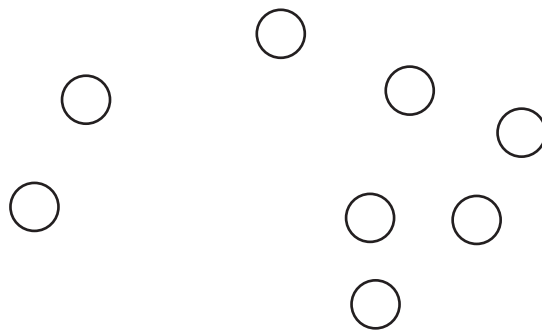
- “What materials do you need to play Bingo? Where can you find the materials? When you are finished playing, where do you put the materials?”

Lesson Synthesis

🕒 5 min

Display Andre and Noah’s representations from the second activity.

Andre



Noah



“Which drawing makes it easier to see what happened in the story? Why?”

If needed, ask “Which drawing makes it easier to see which apple slices were at the picnic first and which apple slices Tyler's dad brought to the picnic?”

“When we organize our drawings, it can make it easier to see what happened in the story.”

Lesson 11: Drawings to Represent Story Problems

Standards Alignments

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

Teacher-facing Learning Goals

- Create drawings that represent story problems.
- Solve Add To, Result Unknown and Take From, Result Unknown story problems.

Student-facing Learning Goals

- Let's draw a picture to show what happens in a story problem.

Lesson Purpose

The purpose of this lesson is for students to draw a picture to represent and solve a story problem.

In previous lessons, students have explained how objects and drawings represent story problems. Students also compared organized and disorganized drawings. This is the first lesson where students are asked to produce a drawing. Students should always be able to use objects to represent the story problem if they find them helpful. It is not an expectation that students will organize or label their drawings. With practice, students should be able to explain how each part of their drawing connects to the story with prompting.

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: Activity 1
- Materials from previous centers: Activity 3

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

How did the student work that you selected impact the direction of the discussion? What student work might you pick next time if you taught the lesson again?

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

⌚ 5 min

Represent and Solve a Story Problem**Standards Alignments**

Addressing K.OA.A.2

Student-facing Task Statement

Han collected 4 leaves at the park.

Priya gave him 5 more leaves.

How many leaves does Han have now?

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

Student Responses

9 leaves. Sample responses:

- Students use objects to represent the story problem.
- Students draw a detailed picture to represent the story problem.

- Students draw symbols such as circles to represent the story problem.

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

Warm-up

⌚ 10 min

Which One Doesn't Belong: Butterflies

Standards Alignments

Building Towards K.OA.A.2

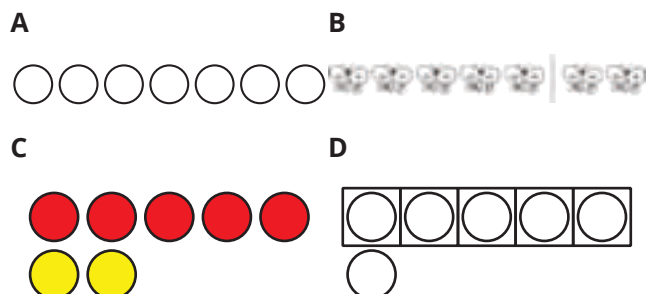
This warm-up prompts students to carefully analyze and compare features of four different drawings. The activity also enables the teacher to hear the words students know and how they talk about characteristics of drawings.

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:

Launch

- Groups of 2
- Display 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

- "In the next activity, we will draw pictures to

- They are all together in one line. You can not see 2 groups.

B doesn't belong because:

- They are not circles.

C doesn't belong because:

- It is not 1 color.

D doesn't belong because:

- There are only 6. There are not 7.

show what is happening in a story problem."

Activity 1

🕒 10 min

Draw a Picture

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to draw a picture to represent and solve a story problem (MP2). Many students may draw pictures with details—for example, a drawing of students playing soccer. Students should have access to connecting cubes and two-color counters to help them represent the story (MP5).

🕒 Access for Students with Disabilities

Action and Expression: Internalize Executive Functions. Invite students to verbalize what they are going to draw before they begin. Students can speak quietly to themselves, or share with a partner.

Supports accessibility for: Organization, Conceptual Processing, Language

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement

Launch

- Groups of 2
- Give students access to two-color counters



There were 7 kids playing soccer in the park.

3 of the kids left to go play on the swings.

How many kids are playing soccer in the park now?

.....

Student Responses

4 kids. Sample responses:

- Students draw a picture with details to represent the story problem.
- Students draw a picture with circles, lines, or other symbols to represent the kids.

and connecting cubes.

- 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.
- “Draw a picture to show what is happening in the story problem.”

Activity

- 3 minutes: independent work time
- Monitor for students who draw pictures with details to represent the story. Monitor for students who use symbols such as circles.

Synthesis

- “Let’s take a look at what other students drew.”

Activity 2

🕒 15 min

Picture Gallery Walk

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to compare drawings to represent story problems. Students participate in a gallery walk to see the different drawings that were created. Consider creating a cue or signal to indicate when students should move from one drawing to the next. In

the activity synthesis, students compare and make connections between using detailed pictures and symbols such as circles to represent the story. Students also share different ways to represent subtraction in a drawing (MP2).

Access for English Learners

MLR8 Discussion Supports. During the gallery walk, invite students to pair verbal explanations with pointing to the corresponding parts of the drawings when answering the question, “How does your drawing show what happens in the story?”

Advances: Speaking, Representing

Student Responses

Answers vary.

Launch

- Groups of 2
- “We are going to do a gallery walk and see the pictures that everyone drew to show the story.”
- “As you walk around, notice how other students organized their drawings. How did each person show the kids who were playing soccer and the kids who left to go play on the swings?”
- “As you walk around, you can ask ‘How does your drawing show what happens in the story?’”

Activity

- Invite half the class to stand next to their drawing while the other half of the class walks around and looks at the drawings.
- 5 minutes: gallery walk
- Monitor for students who clearly show which students were playing soccer initially and which students left to play on the swings.
- Switch groups.
- 5 minutes: gallery walk

Synthesis

- Invite a student who drew a drawing with details to share.
- Invite a student who drew symbols such as circles to represent the kids. If no student did this, draw 7 circles and cross out 3 of them.
- "What is the same about how ____ and ____ showed the story?"
- "What do the circles in this picture show from the story?" (They show the kids who were playing soccer and the kids who left.)
- "What other ways to show the kids who were playing soccer and the kids who left to go play on the swings did you see during the gallery walk?" (Sample responses: They crossed some out. They circled the kids who went away. They used a different color to show the kids who left to play on the swings.)
- As students share, display student work that shows the students who left in different ways.
- "There were 7 kids playing soccer and then 3 of the students left to go play on the swings. We can write that as '7 take away 3' or ' $7 - 3$ '."

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with addition and subtraction, as well as describing and building shapes. Students choose from any stage of previously introduced centers.

- Bingo

- Math Fingers
- Subtraction Towers
- 5-frames
- Math Stories
- Counting Collections

Materials to Gather

Materials from previous centers

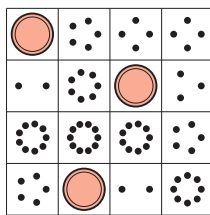
Required Preparation

- Gather materials from:
 - Bingo, Stages 1-3
 - Math Fingers, Stages 1-3
 - Math Stories, Stages 1 and 2
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2
 - Counting Collections, Stage 1

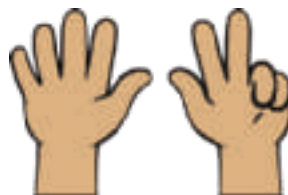
Student-facing Task Statement

Choose a center.

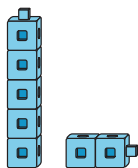
Bingo



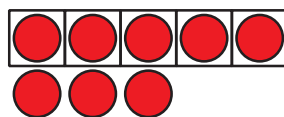
Math Fingers



Subtraction Towers



5-frames



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

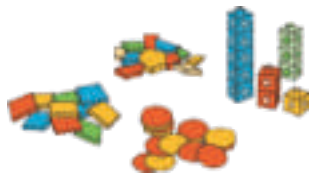
Synthesis

- "How did your group decide who went first?"

Math Stories



Counting Collections



Lesson Synthesis

⌚ 5 min

"Today we drew pictures to show what happened in a story problem. We also looked at many different drawings and saw different ways to draw and organize our drawings."

"What can you add to or change in your drawing to make it better?"

If time, have students make additions or changes to their drawings.

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

Response to Student Thinking

Students write a number other than 9.

Next Day Support

- During the launch of the next days' activity, have students use objects and draw a picture to represent the problem in the cool-down.

Lesson 12: Compare Addition and Subtraction Story Problems

Standards Alignments

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

Teacher-facing Learning Goals

- Compare addition and subtraction story problems.
- Solve Add To, Result Unknown and Take From, Result Unknown story problems.

Student-facing Learning Goals

- Let's figure out what's the same and what's different about these story problems.

Lesson Purpose

The purpose of this lesson is to solve and compare Add To, Result Unknown and Take From, Result Unknown story problems.

In previous lessons, students solved Add To and Take From, Result Unknown story problems. The purpose of this lesson is to solve Add To, Result Unknown and Take From, Result Unknown story problems with the same context, which gives students an opportunity to focus on the action in each story and how it determines whether they need to add or subtract to solve the problem (MP2). This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR8 (Activity 2)

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
Activity 1	10 min
Activity 2	10 min
Activity 3	20 min
Lesson Synthesis	10 min

Teacher Reflection Question

Think about a time you recently made a mistake during math class. How did you leverage your mistake to show students that mistakes are just learning in progress?

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

🕒 0 min

Unit 4, 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

Choral Count: Count to 40

Standards Alignments

Addressing K.CC.A.1

The purpose of this warm-up is for students to practice saying the verbal count sequence to 40. Students also see the numbers written as they say each number.

Instructional Routines

Choral Count

Student Responses

Students count to 40.

Launch

- "Let's count to 40."

Activity

- Count to 40 together.
- Record as students count.
- Count to 40 1–2 times. Point to the numbers as students count.

Synthesis

- "What number comes next when I count? 4, 5, 6, 7..."
- "What number comes next when I count? 12, 13, 14, 15..."
- "What number comes next when I count? 16, 17, 18, 19..."

Activity 1

🕒 10 min

Ducks in the Pond

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to solve an Add To, Result Unknown story problem. In the next activity, students will compare this story problem and a Take From, Result Unknown

story problem with the same context. Students have seen expressions in previous lessons, but this is the first time that students are introduced to the term **expression**.

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Use different colors to represent the 5 ducks that start in the pond and the 4 more that come to swim in the pond. Connect the context with the counters and the expression.

Supports accessibility for: Conceptual Processing

Materials to Gather

Connecting cubes or two-color counters

Student-facing Task Statement



There were 5 ducks in the pond.

4 more ducks came to the pond to swim.

How many ducks are in the pond now?

.....

Student Responses

9 ducks. Sample responses:

- Students use math tools such as

Launch

- Groups of 2
- Give students access to connecting cubes or counters.
- “You can find many different plants and animals in parks. What kind of plants or animals have you seen in your community?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Display the image.
- “This picture is from Audubon Park in New Orleans. How is this park the same as other parks you have been to? How is it different?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- Read the task statement.
- “Tell your partner what happened in the story.”
- 30 seconds: quiet think time
- 1 minute: partner discussion

connecting cubes or counters to represent the story.

- Students draw a picture.

- 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

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

Synthesis

- Invite a student who showed which ducks were in the pond first and which ducks came to the pond to share.
- “There were 5 ducks in the pond and then 4 more ducks came to swim in the pond. We can write that as ‘5 and 4’ or ‘5 + 4’. When we write $5 + 4$, it is called an **expression**.”

Advancing Student Thinking

If students draw very detailed drawings, consider asking:

- “Tell me more about your drawing. How did you decide how to show what happened in the story problem?”
- “Can you draw a picture to show what happens in the story without drawing the actual ducks?”

Activity 2

🕒 10 min

Ducks Swim Ashore

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to solve a Take From, Result Unknown story problem with the same context as the Add To, Result Unknown story problem in the previous activity. The numbers in the two problems are the same. What has changed is the action—that is, instead of 4 ducks joining a group of 5, 4 ducks leave the larger group of 9.

Access for English Learners

MLR8 Discussion Supports. Some students may benefit from the opportunity to act out or use objects to represent the scenario. 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

There were 9 ducks swimming in the pond.

Then 4 of the ducks waddled onto the grass.

How many ducks are swimming in the pond now?

Student Responses

5 ducks. 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 counters.
- Read the task statement.
- Reread the story problem from the first activity.
- “What is the same about the story problems? What is different about them?” (They are both about ducks in the pond. They are different because in the first one, more ducks came to swim in the pond, and in the second one, some of the ducks left the pond.)
- 30 seconds: quiet think time
- 2 minutes: partner discussion
- Share responses.
- Reread the task statement.
- “Show your thinking using drawings, numbers, words, or objects.”

Activity

- 3 minutes: quiet think time

- 2 minutes: partner discussion

Synthesis

- Invite a student to share their representations.
- “There were 9 ducks swimming in the pond and then 4 of the ducks waddled onto the grass. We can write that as ‘9 take away 4’ or ‘ $9 - 4$ ’. When we write $9 - 4$, it is called an expression.”

Advancing Student Thinking

If students draw pictures or symbols that are scattered, consider asking:

- “Can you use your drawing to tell me what happened in the story problem?”
 - “Where are the ducks who were swimming in the pond in your drawing? How do you know? Where are the ducks who waddled onto the grass in your drawing?”
-

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, as well as describing and building shapes. Students choose from any stage of previously introduced centers.

- Bingo
- Math Fingers
- Subtraction Towers
- 5-frames
- Math Stories
- Counting Collections

Materials to Gather

Materials from previous centers

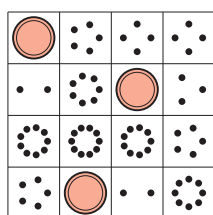
Required Preparation

- Gather materials from:
 - Bingo, Stages 1-3
 - Math Fingers, Stages 1-3
 - Math Stories, Stages 1 and 2
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2
 - Counting Collections, Stage 1

Student-facing Task Statement

Choose a center.

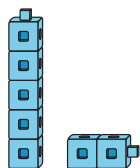
Bingo



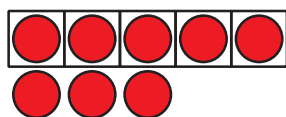
Math Fingers



Subtraction Towers



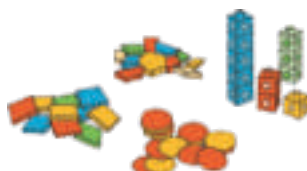
5-frames



Math Stories



Counting Collections



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 are your favorite materials to use during center time?"

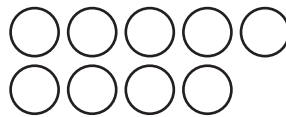
Lesson Synthesis

🕒 10 min

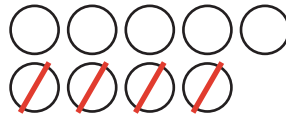
Read the story problem:

There were 5 ducks in the pond.
4 more ducks came to the pond to swim.
How many ducks are in the pond now?

Draw this representation (or display a student representation).



Read the story problem from the second activity and draw this representation (or a similar student representation).



"How are the drawings the same?" (Both have 9 circles. There is a group of 5 in both. There is a group of 4 in both.)

"How are the drawings different?" (In the second drawing, the group of 4 circles is crossed out.)

Write $5 + 4$.

"There were 5 ducks in the pond and then 4 more ducks came to swim in the pond. The first drawing shows 5 plus 4."

Invite students to chorally repeat "5 plus 4" 1–2 times.

Write " $9 - 4$."

"There were 9 ducks swimming in the pond and then 4 of the ducks waddled onto the grass. The second drawing shows 9 minus 4."

Invite students to chorally repeat "9 minus 4" 1–2 times.

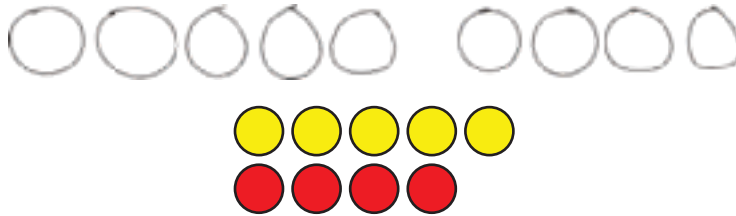
Student Section Summary

In this section, we learned about story problems.

We acted out story problems and used objects and drawings to show what is happening and help us solve story problems.

Sometimes things were added in the story problems.

There were 5 ducks in the pond.
4 more ducks came to the pond to swim.
How many ducks are in the pond now?



Sometimes things were subtracted, or taken away, in the story problems.

There were 5 balls on the playground.
Diego brought 5 of the balls inside.
How many balls are on the playground now?



Lesson 13: Create Story Problems (Optional)

Standards Alignments

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

Teacher-facing Learning Goals

- Create an addition or subtraction story problem.

Student-facing Learning Goals

- Let's think of our own story problems.

Lesson Purpose

The purpose of this lesson is for students to create an addition or subtraction story problem.

In previous lessons, students have represented and solved a variety of Add To, Result Unknown and Take From, Result Unknown story problems. In this optional lesson, students apply what they've learned about story problems throughout the section to tell a story problem that includes an action and a question. Students share and solve story problems with their partner. When students change the story to change the action and the mathematical operation of the problem they understand how addition and subtraction model actions in the real world (MP2, MP4).

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR2 (Activity 1)

Instructional Routines

Questions About Us (Warm-up)

Materials to Gather

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

Materials to Copy

- Questions About Us Chart 5-Frame Template (groups of 1): Warm-up
- Math Stories Stage 2 Backgrounds (groups of 6): Activity 3
- Math Stories Stage 2 Recording Sheet (groups of 2): Activity 3

Lesson Timeline

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

Teacher Reflection Question

Students shared their thinking multiple times in this lesson. What have you noticed about the language students use? What support can you offer to students who struggle to communicate their ideas orally?

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

🕒 0 min

Unit 4, Section B Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Use objects or drawings to represent a story problem.
- Explain how objects or drawings represent a story problem.

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

🕒 10 min

Questions About Us: Colors

Standards Alignments

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

The purpose of this warm-up is for students to consider concepts of number in a familiar context. Students may use the structure of the chart and the 5-frames to determine how many students made each choice (MP7). Students count to find the total in two groups. Students have an opportunity to hear and practice the count sequence. Adjust the context to better reflect students' interests and experiences as needed.

Instructional Routines

Questions About Us

Materials to Copy

Questions About Us Chart 5-Frame Template
(groups of 1)

Required Preparation

- Cut out enough 5-frames to make a chart with a space for each student to answer the survey question.

Student Responses

Sample responses: We can count the dots for orange and the dots for gray. We can count all of the dots. We can add them together.

Launch

- Groups of 2
- Display Questions About Us chart.
- "Which color is your favorite: purple, orange, or gray?"
- 30 seconds: quiet think time
- Record each student's choice with a circle in a 5-frame.

Activity

- "How can we figure out how many students chose purple?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- Demonstrate or invite students to demonstrate counting.
- "How many students chose purple?"
- "How many students chose orange?"
- 30 seconds: quiet think time
- Share responses.

- “How many students chose gray?”
- 30 seconds: quiet think time
- Share responses.

Synthesis

- “How can we figure out how many students chose gray or orange?”
- Demonstrate or invite students to demonstrate counting both groups.
- “How many students chose gray or orange?”
- Demonstrate using words and an expression to record. For example, “7 students chose gray and 9 students chose orange. We can write that as ‘7 and 9’ or ‘7 + 9.’”

Activity 1

🕒 10 min

Create a Story Problem

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to create an addition or subtraction story problem. Students can think of their own subject for the story problem, or they can think of a story problem about the provided picture.

🌐 Access for English Learners

MLR2 Collect and Display. Circulate, listen for and collect the language students use as they create story problems. On a visible display, record words and phrases such as: “more,” “joined,” “went away,” “take away,” and “less.” Review the language on the display, then ask, “Which of these words tell you the story is about addition?” and “Which of these words tell you the story is about subtraction?”

Advances: Representing, Listening

Materials to Gather

Connecting cubes, Two-color counters

Student-facing Task Statement



Student Responses

Students create addition or subtraction story problems, based on the picture or their own topics.

Sample responses:

- There were 7 kids climbing on the statue. 2 of the kids jumped off. How many kids are climbing on the statue now?
- 4 squirrels were eating acorns in the tree. 2 more squirrels climbed up the tree. How many squirrels are in the tree now?

Launch

- Groups of 2
- Give students access to connecting cubes and two-color counters
- “We have been reading and solving story problems. Today, you will get to create your own story problems. What are some things that we could tell story problems about?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.
- “There are many different things that we can tell story problems about. You can choose what you would like to go into your story problem, or you can use this picture to help you think of a story problem.”
- Display image.
- “Many of the story problems we have heard have taken place at playground and parks. This picture is of a statue in Central Park in New York City. Many parks have different things to climb and play on. Does this picture remind you of anything you've seen at parks in your community? How is it the same? How is it different?”
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share responses.
- “Think of a story problem that you can tell to your partner. Remember that a story problem should have a question at the end.”

Activity

- 1 minute: quiet think time
- "Tell your partner your story problem."
- 2 minutes: partner discussion
- "Figure out the story problem your partner told you. Show your thinking using objects, drawings, numbers, or words."
- 2 minutes: independent work time
- 2 minutes: partner discussion

Synthesis

- "Did anyone hear a story problem with addition, or adding more things?"
- Invite 2-3 students to share. Write an expression to represent each story problem.
- "Did anyone hear a story problem with subtraction, or taking away?"
- Invite 2-3 students to share. Write an expression to represent each story problem.

Advancing Student Thinking

If students are unsure of what to tell a story problem about, encourage them to think of a story problem about the people in the picture and ask "What do you think happened to the people first? Then what do you think happened?"

Activity 2

🕒 15 min

Switch the Operation

Standards Alignments

Addressing K.OA.A.2

The purpose of this activity is for students to create an addition or subtraction story problem. Students come up with a story problem that uses the same subject as their partner's story problem, but they change the operation. This gives them an opportunity to compare the action in addition and subtraction problems. Students solve their partner's story problem.

Access for Students with Disabilities

Representation: Access for Perception. Some students may benefit from hearing their partner's story problem more than once.

Supports accessibility for: Language, Attention

Materials to Gather

Connecting cubes, Two-color counters

Student-facing Task Statement

Student Responses

Students tell a story problem. Students use objects or drawings to solve the given story problem.

Launch

- Groups of 2
- Give students access to connecting cubes and two-color counters.
- "Kiran's partner told him this story problem: 'There were 7 kids climbing on the statue. 2 of the kids jumped off. How many kids are climbing on the statue now?'"
- "Kiran needs to think of a different kind of story problem that we can tell about the kids playing on the statue. What kind of story problem can he tell?"
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- Share and record responses.
- If needed, say "In the first story, there were some kids climbing on the statue and some of them jumped off. We could tell a different story where the kids were climbing and more kids came to join them."
- "In the last activity, your partner told you a story problem. What was the story problem that your partner told you about?"

- 30 seconds: quiet think time
- “Now you will think of a different story problem about the same thing that your partner told you. For example, if your partner told you a story problem about kids playing on the statue, think of a different kind of story problem about kids playing on the statue.”
- 2 minutes: independent work time

Activity

- “Tell your partner your story problem.”
- 2 minutes: partner discussion
- “Solve the story problem your partner told you. Show your thinking using objects, drawings, numbers, or words.”
- 2 minutes: independent work time
- 2 minutes: partner discussion
- Monitor for students who change the operation when creating a new story problem.

Synthesis

- Invite 2-3 groups of students to share story problems about the same subject but with a different operation.

Advancing Student Thinking

If students are unsure how to change the story problem, ask, “What happened in the story problem that your partner told you? Were more things added? Were some things taken away?”

Activity 3

🕒 20 min

Revisit Math Stories, Act It Out

Standards Alignments

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

The purpose of this activity is for students to learn a new variation of stage 2 of the Math Stories center. Students use two-color counters to act out and tell stories involving addition or subtraction with the background mats. Students use objects or drawings to represent and solve the story problem that is told to them by their partner.

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

- Bingo
- Math Fingers
- Subtraction Towers
- 5-frames
- Counting Collections

Materials to Gather

Materials from previous centers, Two-color counters

Materials to Copy

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

Required Preparation

- Each group of 2 needs 10 two-color counters.
- Gather materials from:
 - Bingo, Stages 1-3
 - Math Fingers, Stages 1-3
 - Math Stories, Stages 1 and 2
 - Subtraction Towers, Stage 1
 - 5-frames, Stages 1 and 2
 - Counting Collections, Stage 1

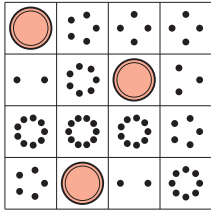
Student-facing Task Statement

Choose a center.

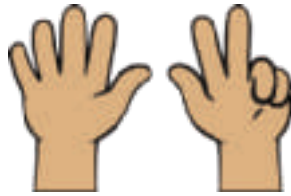
Launch

- Groups of 2
- Give each group of students 10 two-color

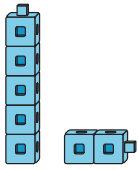
Bingo



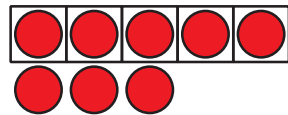
Math Fingers



Subtraction Towers



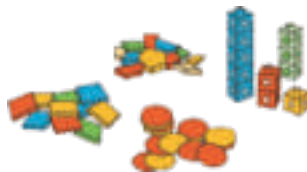
5-frames



Math Stories



Counting Collections



counters and a set of background mats. Give each student a recording sheet.

- “We are going to learn a new way to do the Math Stories center.”
- Display the background mat with a playground.
- “This time I need to think of a story to go with the background mat. I also need to think of a question to ask at the end of the story.”
- “My story is: 6 kids were playing on the rings. Then 2 of the kids left to go play on the slide.”
- “What question can I ask at the end of my story?” (How many kids are still playing on the rings?)
- 30 seconds: quiet think time
- Share responses.
- “Now I’ll tell my partner my story and ask the question.”
- “You can use the background mats to help you act out the story if it is helpful. You can also draw a picture on the recording sheet. Write a number to show the answer to the story problem.”
- “Take turns telling story problems to go with the background mats. Remember to include a question for your partner at the end of your story problem.”

Activity

- 8 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.
- 8 minutes: center work time
- If time, invite students to choose another

center.

Synthesis

- Invite 2 students to share different story problems about the same background mat.
- As each student shares, record the action with words and numbers and an expression. For example: "3 and 6" and " $3 + 6$ ".
- "What was the same about the stories? What was different?"

Lesson Synthesis

 5 min

"We have been learning all about story problems. What are the most important things to remember about story problems?"

Section C: Addition and Subtraction Expressions

Lesson 14: Expressions and Story Problems

Standards Alignments

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

Teacher-facing Learning Goals

- Interpret expressions in relation to story problems.

Student-facing Learning Goals

- Let's figure out how expressions go with the story problems.

Lesson Purpose

The purpose of this lesson is for students to connect expressions to story problems.

In previous lessons, students were introduced to addition and subtraction expressions, as teachers wrote them, as another way to represent story problems. In this lesson, students explain how expressions connect to story problems and choose which expression correctly represents a story problem (MP2).

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Connecting cubes or counters: Activity 1, 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 opportunities are you giving students to reflect on their understanding of the mathematical content?

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

🕒 0 min

Unit 4, Section C Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Explain how an expression connects to a drawing or story problem.

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

Warm-up

🕒 10 min

Choral Count: Count On

Standards Alignments

Addressing 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. To support students as they learn to count on, consider asking “What number comes after 3?” or providing a running start by counting “1, 2, 3...” and having students continue the count.

Instructional Routines

Choral Count

Student Responses

3, 4, 5, 6, 7, 8, 9, 10

Launch

- “Let’s count to 10.”
- Count to 10.

Activity

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

Synthesis

- “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

Expression for a Story Problem

Standards Alignments

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

The purpose of this activity is for students to explain how a subtraction expression represents a story problem (MP2). Students connect the expression to the story problem and then solve the story problem. Students will be introduced to equations in a later unit.

Access for English Learners

MLR8 Discussion Supports. Invite students to use connecting cubes or counters with verbal descriptions to explain what happened in the story problem.

Advances: Listening, Representing, Speaking, Conversing

Materials to Gather

Connecting cubes or counters

Student-facing Task Statement

There were 10 people riding bikes in the park.

Then 6 of the people stopped riding to have lunch.

How many people are riding bikes now?



Student Responses

4 people

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.
- Write the expression $10 - 6$.
- “How does this expression show what happens in the story problem?”
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.

Activity

- Reread the task statement.
- “Show your thinking using drawings, numbers, words, or objects.”
- 2 minutes: independent work time
- 2 minutes: partner discussion

Synthesis

- Write “ $10 - 6$.”
- “What does the 10 represent in the story problem? What does the 6 represent?”
- “10 take away 6 is 4. We can write that as $10 - 6$ is 4.”

Activity 2

⌚ 10 min

Which Expression?

Standards Alignments

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

The purpose of this activity is for students to choose expressions that represent story problems (MP2).

Access for Students with Disabilities

Representation: Develop Language and Symbols. Synthesis: Students may benefit from comparing the two problems and identifying what is different about what happened in the story and the expression that represents the story. Make connections between Lin putting more rocks in her jar and the addition symbol in the expression and the kids that left to go jump rope and the subtraction symbol in the expression.

Supports accessibility for: Visual-Spatial Processing, Conceptual Processing

Materials to Gather

Connecting cubes or counters

Student-facing Task Statement

1. There were 2 rocks in Lin's jar.
At the park, Lin put 4 more rocks into her jar.
How many rocks are in Lin's jar now?

Launch

- Groups of 2
- Give students access to connecting cubes or counters.
- Read and display the task statement and

$3 + 3$

$6 - 2$

$2 + 4$

2. There were 8 kids playing hopscotch.
3 of the kids left to go jump rope.
How many kids are playing hopscotch now?

$8 + 3$

$3 - 3$

$8 - 3$



Student Responses

1. $2 + 4$
2. $8 - 3$

the expressions.

- "Which expression shows what happened in the story problem? Tell your partner how you know."

Activity

- 30 seconds: quiet think time
- 2 minutes: partner discussion
- Share responses.
- Repeat the steps with the second story problem and expressions.

Synthesis

- Display $8 + 3$ and $8 - 3$. If needed, reread the second story problem.
- "Which expression did you choose? How did you know which expression to choose?" ($8 - 3$. Some of the kids left, so I chose the one with the minus sign.)
- Display $8 - 3$.
- "Use this expression to tell your partner what happened in the story."

Advancing Student Thinking

If students match the second story problem with an expression other than $8 - 3$, consider asking:

- "Can you tell me what is happening in the story problem?"
- "Is something being added or taken away in the story problem? How can that help you figure out which expression matches?"

Activity 3

🕒 25 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice writing numbers and telling and solving story problems. Students choose from any stage of previously introduced centers.

- Number Race
- Math Stories

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:
 - Number Race, Stage 1
 - Math Stories, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Number Race



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 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

- "What was your favorite story problem that

your partner told you? Why was it your favorite?"

Lesson Synthesis

 5 min

Read and display the task statement from the first activity.

There were 10 people riding bikes in the park.
Then 6 of the people stopped riding to have lunch.
How many people are riding bikes now?

Display $10 + 6$.

"Han says that $10 + 6$ matches this story problem because there are 10 people first and then there are 6 people. What do you think?" (It doesn't match. 6 people stopped riding bikes, so you need to use $10 - 6$.)

Lesson 15: Expressions and Drawings

Standards Alignments

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

Teacher-facing Learning Goals

- Interpret expressions in relation to drawings.

Student-facing Learning Goals

- Let's match expressions to drawings.

Lesson Purpose

The purpose of this lesson is for students to connect expressions to drawings.

In previous lessons, students created drawings to represent story problems and connected drawings and expressions to story problems. In this lesson, students match expressions to drawings and create drawings and expressions. This lesson is moving students toward a more abstract understanding of expressions (MP2). In previous lessons, students had the context of a story problem and a clear action to help them relate to the expressions. In this lesson, students use their understanding of the plus and minus signs to determine whether to add or subtract.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

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

Materials to Copy

- Shake and Spill Stage 3 Recording Sheet
Kindergarten (groups of 1): Activity 3

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

Revisit the norms you established as a class about doing mathematics. Which norms are

Activity 1	10 min
Activity 2	10 min
Activity 3	25 min
Lesson Synthesis	5 min

working and which might need revision? Are there any norms you or your students might want to add?

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

🕒 0 min

Unit 4, Section C Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Explain how an expression connects to a drawing or story problem.
- Fill in an expression to represent a drawing.

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

Warm-up

🕒 10 min

Notice and Wonder: Shapes and Numbers

Standards Alignments

Addressing K.OA.A.1

The purpose of this warm-up is to elicit the idea that there can be a connection between drawings and expressions, which will be useful when students interpret the numbers and symbols in an expression in relation to drawings. While students may notice and wonder many things about the image and

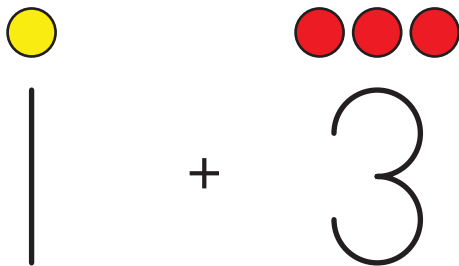
expression, the important discussion points are that there are 3 red counters and the number 3 and that there is 1 yellow counter and the number 1.

Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?
What do you wonder?



Student Responses

Students may notice:

- There is 1 yellow counter and the number 1.
- There are 3 red counters and the number 3.
- There are 4 counters and $1 + 3$ is 4.

Students may wonder:

- Why are there more red counters than yellow 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 many counters are there? How do you see them?" (4. I see 1 yellow counter and 3 red counters.)
- "In the next activity, we will match expressions to drawings."

Activity 1

🕒 10 min

Match Drawings to Expressions

Standards Alignments

Addressing K.OA.A.1





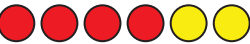

The purpose of this activity is for students to match drawings to expressions. Students use the structure of the dots to decide whether they represent an addition or subtraction expression and then identify that expression (MP2, MP7).

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Students may benefit from creating drawings of the expressions to help find the matching drawing. Invite students to use two-color counters to recreate the expression or draw a picture to show the expression.

Supports accessibility for: Visual-Spatial Processing, Conceptual Processing

Student-facing Task Statement

	$9 - 2$
	$6 - 3$
	$4 + 2$
	$6 + 3$
	$5 + 3$
	$7 + 0$

Student Responses

Students match:

- the first image to $6 + 3$.
- the second image to $7 + 0$.
- the third image to $9 - 2$.
- the fourth image to $5 + 3$.
- the fifth image to $4 + 2$.
- the sixth image to $6 - 3$.

Launch

- Groups of 2
- "Draw a line to match each drawing to an expression. Be prepared to share your thinking."

Activity

- 4 minutes: independent work time
- "Share your matches with your partner."
- 2 minutes: partner discussion

Synthesis

- Display the 9 circles with 2 crossed out:



- "For the expression $9 - 2$, where do you see the 9 in the drawing? Where do you see the 2?" (There are 9 circles and 2 circles are crossed out.)
- Display the 7 red counters:



- "Which expression did you match to this drawing? Why?" ($7 + 0$, because 7 and 0 more is still 7.)
- "When we add 0, there are none added, so

the drawing shows 7 and 0 more."

Activity 2

🕒 10 min

Create Expressions and Drawings

Standards Alignments

Addressing K.OA.A.1

The purpose of this activity is for students to create a drawing when given an expression and to fill in expressions when given a drawing.

🌐 Access for English Learners

MLR8 Discussion Supports. Prior to solving the problems, invite students to make sense of the expressions and take turns sharing their understanding with their partner. Listen for and clarify any questions about the expressions or drawings.

Advances: Reading, Representing

Student-facing Task Statement

Fill in the missing expressions and drawings.

$4 + 3$ ○○○○|○○○

$4 - 0$
 _____ - _____ ○○○○○○○○○

$5 + 3$

Fill in the missing expressions and drawings.

$8 - 2$
 _____ + _____ ●●●●●●●●

Launch

- Groups of 2
- Display student book.
- "What do you notice? What do you wonder?" (There are expressions and drawings. Some of the expressions are missing. Some of the drawings are missing. I wonder why one of the drawings has red and yellow.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.
- "We noticed that there are some things missing. Work with your partner to fill in the missing expressions and drawings."

$$1 + 6$$

_____ - _____



Student Responses

Students fill in the correct expressions and drawings.

Activity

- 5 minutes: partner work time

Synthesis

- Display image from student book:



- "What expression did you write to go with this drawing?" ($6 - 3$)
- "Where do you see the 3 circles that are crossed out in the expression?"
- "Where do you see all 6 circles in the expression?"

Advancing Student Thinking

If students draw an image of addition for a subtraction expression or an image of subtraction for an addition expression, consider asking:

- "What do you know about this expression?"
- "Which part of the expression tells us whether to add or subtract? How can that help you figure out what to draw?"

Activity 3

🕒 25 min

Introduce Shake and Spill, Represent

Standards Alignments

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

The purpose of this activity is for students to learn stage 3 of the Shake and Spill center. Students practice counting to find the total of 2 groups of objects and representing addition with an

expression.

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

- Number Race
- Math Stories

Materials to Gather

Crayons, Materials from previous centers,
Two-color counters

Materials to Copy

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

Required Preparation

- Each group of 2 needs 10 two-color counters.
- Each group of 2 needs access to a yellow crayon and a red crayon.
- Gather materials from:
 - Number Race, Stage 1
 - Math Stories, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Shake and Spill



Number Race



Math Stories

Launch

- Groups of 2
- Give each group of students two-color counters and red and yellow crayons. Give each student a recording sheet.
- “We are going to learn a new way to play Shake and Spill. One partner will choose some counters, shake them, and spill them. Then draw a picture to show the red and yellow counters. Work together to figure out how to fill in an expression to show how many red and yellow counters. Take turns shaking and spilling the counters.”

Activity

- 8 minutes: partner work time
- “Now you can choose another center. You can also continue playing Shake and Spill.”



- 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 $4 + 3$.
- “Andre and Tyler wrote $4 + 3$. What do you think their counters looked like?” (4 red counters and 3 yellow counters. 4 yellow counters and 3 red counters.)

Lesson Synthesis

🕒 5 min

Draw 5 circles with 3 crossed out. Display $5 - 3$.



“Clare drew this picture to match the expression. She says that she can use the same drawing to match $5 + 3$. What do you think?” (She can’t use the same drawing. There are the same numbers but one is addition and one is subtraction.)

“What should Clare draw to show $5 + 3$?” (She can draw 5 circles and 3 more circles.)

Draw the drawing or invite a student to draw the drawing.

Lesson 16: Find the Value of Expressions

Standards Alignments

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

Teacher-facing Learning Goals

- Find the value of addition and subtraction expressions.

Student-facing Learning Goals

- Let's find the value of expressions.

Lesson Purpose

The purpose of this lesson is for students to find the value of addition and subtraction expressions in a way that makes sense to them.

In previous lessons, students interpreted expressions and connected expressions to story problems and drawings. This is the first lesson where students begin by working with only expressions. Because students have matched expressions to drawings in previous lessons, students may create a drawing to find the value of the expression. Students may also use their fingers or objects to represent the expression and count to find the total or difference.

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

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

Materials to Copy

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

Lesson Timeline

Warm-up

10 min

Teacher Reflection Question

In a previous unit, students represented numbers in multiple ways, including using their

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

fingers, objects, and drawings. How did students work with representing numbers prepare them to find the value of expressions in this lesson?

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

🕒 5 min

Find the Value of the Expression

Standards Alignments

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

Student-facing Task Statement

Find the value of the expression.

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

$$1 + 4$$

Student Responses

5. Sample response:



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

Warm-up

⌚ 10 min

What Do You Know About $3 + 2$?

Standards Alignments

Addressing K.OA.A.1

The purpose of this What Do You Know About ____? is to invite students to share what they know and how they can represent the expression $3 + 2$.

Instructional Routines

What Do You Know About ____?

Student-facing Task Statement

What do you know about $3 + 2$?

Student Responses

Sample responses:

- It has a plus sign. It is addition.
- It is 3 and 2 more.
- It is 5.
- We can show 3 fingers and 2 more fingers.
- We can draw 3 circles and 2 circles.
- We can take out 3 cubes and 2 cubes.

Launch

- Display the expression.
- "What do you know about $3 + 2$?"
- 1 minute: quiet think time

Activity

- Record responses.
- "How could we show $3 + 2$?"

Synthesis

- "3 and 2 is how many? How do you know?"

Activity 1

⌚ 10 min

Introduce Roll and Add, Addition Expressions

Standards Alignments

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

The purpose of this activity is for students to learn stage 2 of the Roll and Add center. Students roll to find 2 numbers, fill in an expression, and find the value of the expression. The purpose of the activity synthesis is to highlight different representations students used to find the value of the expressions, such as using fingers, using objects, and drawing pictures (MP2).

Materials to Gather

Connecting cubes or counters

Materials to Copy

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

Launch

- Groups of 2
- Give each group of students a number mat and access to connecting cubes or two-color counters. Give each student a recording sheet.
- “We are going to learn a new way to play the Roll and Add center.”
- Display the recording sheet and the number mat.
- “I need to roll 2 cubes onto the mat. I’ll use the numbers to fill in an expression.”
- Demonstrate rolling 2 cubes and filling in an expression.
- “Now my partner and I need to work together to find the value of the expression. What can we do to find the value of the expressions?” (You can use your fingers. You can use objects. You can draw a picture.)
- Invite 2 students to demonstrate methods to find the value of the expression.
- Demonstrate writing the total on the line.
- “Work with your partner to roll 2 cubes, fill in an expression, and find the value of the expression. Take turns rolling.”

Activity

- 7 minutes: partner work time

- Monitor for students who use the methods listed in the activity narrative to find the value of expressions.

Synthesis

- Invite a student who used their fingers to find the value an expression to share.
- Invite a student who used objects to find the value of an expression to share.
- Invite a student who drew a picture to find the value of an expression to share.
- After each student shares, ask students where they see each number in the expression in the representation.

Activity 2

🕒 10 min

Find the Value of Expressions

Standards Alignments

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

The purpose of this activity is for students to find the value of addition and subtraction expressions.

Access for English Learners

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

Advances: Reading, Speaking

Access for Students with Disabilities

Action and Expression: Develop Expression and Communication. Some students may benefit from using 5-frames to find the value of the expression. Give students access to 5-frames so that they can use two-color counters and a 5-frame to represent each expression.

Supports accessibility for: Organization, Conceptual Processing

Materials to Gather

Connecting cubes or counters

Student-facing Task Statement

3 + 1	_____

6 - 3	_____

5 - 4	_____

7 + 2	_____

5 + 0	_____

9 - 4	_____

Launch

- Groups of 2
- Give students access to two-color counters or connecting cubes.
- Write and display $4 - 2$.
- "Find the value of $4 - 2$."
- 1 minute: independent work time
- "Show your partner how you found the value of $4 - 2$. What is the same and what is different about how you found the value of the expression?" (We both showed 4 things first and we both took away 2 things. One of us put down 2 fingers and one took off 2 counters.)
- 1 minute: partner discussion
- Share responses.
- " $4 - 2$ is 2."
- "Work with your partner to find the value of each expression. Write your answers on the line next to each expression."

Activity

- 6 minutes: partner work time

Synthesis

- Display answers.
- "How can our fingers help us find the value of an expression?"
- "How can counters help us find the value of an expression?"
- "How can drawing a picture help us find the value of an expression?"

Student Responses

4
3
1
9
5
5

Advancing Student Thinking

If students find a value other than 5 for $9 - 4$, consider asking:

- “What do you know about this expression?”
- “Can you use these connecting cubes to show the expression? How can the cubes help you find the value of the expression?”

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 story problems and expressions, as well as writing numbers.

- Roll and Add
- Shake and Spill
- Number Race
- Math Stories

Materials to Gather

Materials from previous centers

Required Preparation

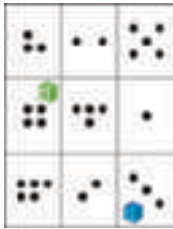
- Gather materials from:
 - Roll and Add, Stages 1 and 2

- Shake and Spill, Stages 1-3
- Number Race, Stage 1
- Math Stories, Stages 1 and 2

Student-facing Task Statement

Choose a center.

Roll and Add



Number Race



Shake and Spill



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 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 something that used to be challenging for you that you've gotten better at? What did you do to help yourself improve?"

Lesson Synthesis

🕒 5 min

Display $4 - 1$.

"Tell your partner 2 different ways that you can find the value of this expression."

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

Response to Student Thinking

Students find a value other than 5 for the expression $1 + 4$.

Next Day Support

- During the launch of the first activity in the next lesson, have students use connecting cubes or two-color counters to represent and find the value of the expression.

Lesson 17: Add 0 and 1

Standards Alignments

Addressing K.CC.A.3, K.CC.B.4.c, K.OA.A.1, K.OA.A.2

Building Towards K.OA.A.5

Teacher-facing Learning Goals

- Understand that adding 0 results in the same number.
- Understand that adding 1 results in the next number in the count sequence.

Student-facing Learning Goals

- Let's see what happens when we add 0 or 1.

Lesson Purpose

The purpose of this lesson is for students to notice patterns when 0 and 1 are added to a number.

In previous lessons, students connected expressions to drawings and used drawings to help find the value of expressions. In previous sections and lessons, students developed their understanding of the meaning of zero as they solved story problems with a result of 0 and found the value of expressions where 0 is added or subtracted and where 0 is the result. In this lesson, students fill in expressions to represent 0 and 1 being added to a group of images and find the total. While students find the value of the expressions in the first activity, they may notice, through repeated reasoning, the pattern that the number stays the same when 0 are added and that the total is the next counting number when 1 is added (MP7, MP8). In the second activity, students notice and discuss these patterns.

This lesson has a Student Section Summary.

Access for:



Students with Disabilities

- Representation (Activity 2)



English Learners

- MLR2 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Connecting cubes or counters: Activity 1,

Materials to Copy

- Add 0 and 1 Mat (groups of 2): Activity 1

Activity 3

- Materials from previous centers: Activity 3
- Find the Value of Expressions within 10 Stage 1 Cards (groups of 2): Activity 3
- Find the Value of Expressions within 10 Stage 1 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

The standards ask students to count on from a given number (K.CC.A.2) and to understand that each successive number names refers to a quantity that is one larger (K.CC.B.4.c). How will the work in this lesson support students in counting on from a given number?

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

⌚ 0 min

Unit 4, Section C Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Use fingers, objects, or drawings to find the value of an expression.
- Count all to determine the total when 0 or 1 are added.
- Use knowledge of the count sequence to determine the total when 1 is added.

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

Warm-up

🕒 10 min

Notice and Wonder: Add 1 More

Standards Alignments

Addressing K.CC.B.4.c

The purpose of this warm-up is to elicit the idea that adding 1 results in the next number in the count sequence, which will be useful when students find the value of expressions with $+1$ in a later activity. While students may notice and wonder many things about these towers, 1 more being added to each tower and how that affects the total number of cubes are the important discussion points.

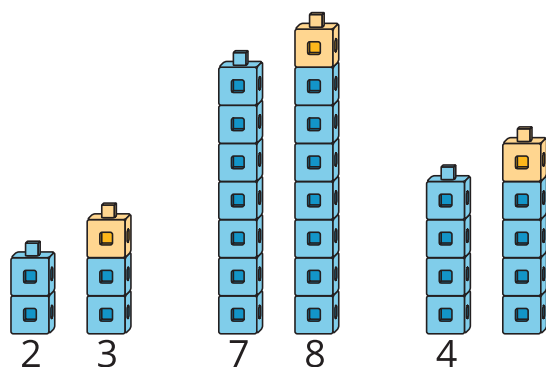
Instructional Routines

Notice and Wonder

Student-facing Task Statement

What do you notice?

What do you wonder?



Student Responses

Students may notice:

- There are blue cubes and yellow cubes.
- There is one more cube on the next tower.
- The towers are labeled with numbers.

Students may wonder:

- Why doesn't the last tower have a number?
- How many cubes are in the last tower?

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

- Point to the tower with 2 cubes and then to the tower with 3 cubes while saying "What changed from this tower to this tower?" (There are still 2 blue cubes, but 1 more yellow cube was put on top.)
- Point to the tower with 2 cubes and then to the tower with 3 cubes while saying "What expression can we write to show what changed from this tower to this tower?" ($2 + 1$)
- "How many cubes do you think are in the last

- Why are there 2 different colors?

tower? How do you know?" (5. I counted them. I know that there is 1 more than the last tower, and 5 is one more than 4.)

Activity 1

🕒 10 min

Add 0 and 1

Standards Alignments

Addressing K.CC.B.4.c, K.OA.A.2

Building Towards K.OA.A.5

The purpose of this activity is to find the value of addition expressions with +0 and +1. Students may connect adding 1 to getting the next number in the counting sequence and will likely observe that adding 0 does not change the number (MP7). These connections will be highlighted in the next activity.

Materials to Gather

Connecting cubes or counters

Materials to Copy

Add 0 and 1 Mat (groups of 2)

Required Preparation

- Each group of 2 needs 1 connecting cube.

Student-facing Task Statement

4 + _____

2 + _____

Launch

- Groups of 2
- Display a tower of 3 connecting cubes:



- "Mai has a tower with 3 cubes. Mai wants to add 0 cubes to the tower. What should Mai do?" (Nothing. When you add 0, you don't add anything.)

$8 + \underline{\quad}$

$3 + \underline{\quad}$

$9 + \underline{\quad}$

$1 + \underline{\quad}$

Student Responses

Answers vary.

- 30 seconds: quiet think time
- Share responses.
- Give each group of students a copy of the Introduction master and a connecting cube. Give students access to connecting cubes and two-color counters.
- "Take turns with your partner. Roll the cube to figure out if you need to add 0 or 1. Fill in the expression."
- "Find the value of the expression and write the number on the line. You can use objects or drawings if they are helpful."

Activity

- 5 minutes: partner work time

Synthesis

- "In the next activity we will look at the expressions that one group wrote to see if we can notice any patterns."

Activity 2

Notice +0 and +1

Patterns

 10 min

  PLC Activity

Standards Alignments

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

The purpose of this activity is to notice the pattern that when 0 is added to a number, the number stays the same and the pattern that when 1 is added to a number, the total is the next number in the count sequence, or 1 more (MP7).

Access for English Learners

MLR2 Collect and Display. Collect the language students use to describe what they notice about the value of the expressions when 0 and 1 are added. Display phrases such as: “When we add 0, the total is the same number that we started with, because nothing was added.” During the synthesis, invite students to borrow language from the display as needed.






Advances: Conversing, Reading

Access for Students with Disabilities

Representation: Internalize Comprehension. Synthesis: Some students may benefit from reiterating the patterns of adding zero and adding one. Make a connection between the two patterns students should notice. For example, “When you add zero to any number you get the same number because adding zero is adding nothing”, “When you add one to any number the total is the next number in the count sequence, or one more.”

Supports accessibility for: Conceptual Processing, Organization

Student-facing Task Statement

$4 + 0$	4	
$2 + 0$	2	
$8 + 0$	8	
$3 + 1$	4	
$9 + 1$	10	
$1 + 1$	2	

Launch

- Groups of 2
- Display student book
- “Diego and Mai recorded their addition expressions and their values on this page. What do you notice? What do you wonder?” (They always added 1 or 0. Sometimes the first and last number are the same.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share and record responses.



Student Responses

Answers vary.

Activity

- “Which expressions show that 0 were added?” ($4 + 0$, $2 + 0$, and $8 + 0$)
- 30 seconds: quiet think time
- Share responses. Highlight or circle the expressions that show $+0$.
- “When you played the game, what did you do when you had to add 0?” (Nothing. Zero means none so none were added.)
- 30 seconds: quiet think time
- 1 minute: partner discussion
- Share responses.
- “What do you notice about the value of the expressions when 0 are added?” (It stays the same.)
- 1 minute: quiet think time
- 1 minute: partner discussion
- Share responses.
- “When we add 0, the total is the same number that we started with, because nothing was added.”
- Repeat the steps above with $+1$.

Synthesis

- “ $3 + 0$ is how many?” ($3 + 0$ is 3.)
- “ $2 + 0$ is how many?” ($2 + 0$ is 2.)
- “How do you know that $2 + 0$ is 2?” (Because we didn’t add any more, so the 2 stayed the same.)
- Repeat with $2 + 1$.

Activity 3

🕒 25 min

Introduce Find the Value of Expressions, Color the Total or Difference

Standards Alignments

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

The purpose of this activity is for students to learn stage 1 of the Find the Value of Expressions center. Students take turns choosing an expression card and finding the value of the expression. Students may use their fingers, connecting cubes, two-color counters, or draw a picture to find the value of the expression. After they participate in the center, students choose from any stage of previously introduced centers.

- Roll and Add
- Shake and Spill
- Number Race
- Math Stories

Materials to Gather

Connecting cubes or counters, Materials from previous centers

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)

Required Preparation

- Gather materials from:
 - Roll and Add, Stages 1 and 2
 - Shake and Spill, Stages 1-3
 - Number Race, Stage 1
 - Math Stories, Stages 1 and 2

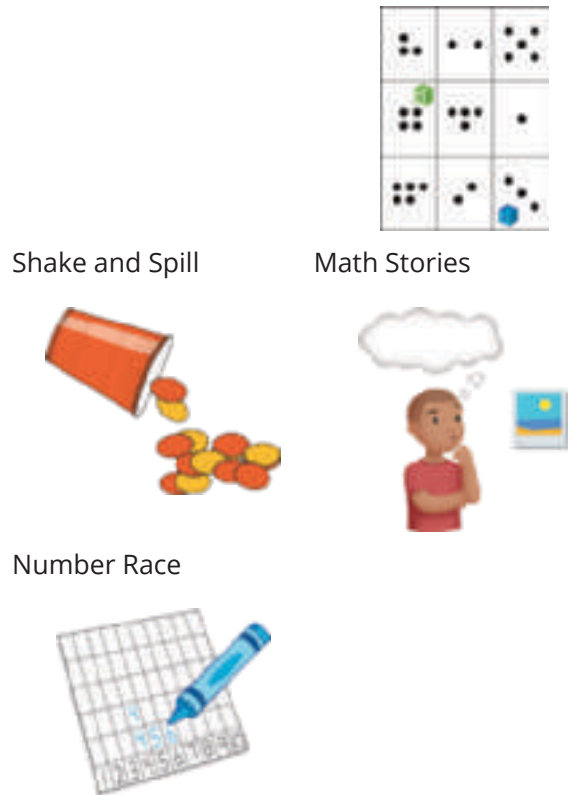
Student-facing Task Statement

Choose a center.

Find the Value of Expressions Roll and Add

Launch

- Groups of 2
- Give each group of students a set of expression cards and access to connecting cubes and two-color counters. Give each student a recording sheet.
- “We are going to learn a center called Find the Value of Expressions. One partner will choose an expression card. The other



partner will find the value of the expression. When you agree, color in the number on the recording sheet. Take turns choosing an expression card."

Activity

- 8 minutes: partner work time
- "Now you can choose another center. You can also continue playing Find the Value of Expressions."
- 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

- Write the number 4.
- "Elena colored in the number 4. What expression do you think was on her card?" ($2 + 2$, $5 - 1$, $3 + 1$)

Lesson Synthesis

🕒 5 min

Write $4 + 0$

"How can we show this expression?" (We can draw 4 dots. We can hold up 4 fingers or take out 4 connecting cubes. We don't need to add any more because 0 are added.)

Draw 4 circles.



"What expression can we use to show that we had 4 dots and we added 0?" ($4 + 0$)

"If I add 1 dot, how many dots will I have? How do you know?" (5. Adding one gives you the next number. 5 is one more than 4.)

"What expression can we use to show that we had 4 dots and we added 1 more?" ($4 + 1$)

Student Section Summary

In this section, we used numbers and symbols to show when things are added and when things are subtracted, or taken away.

We matched expressions to story problems and drawings.

$$8 - 6$$

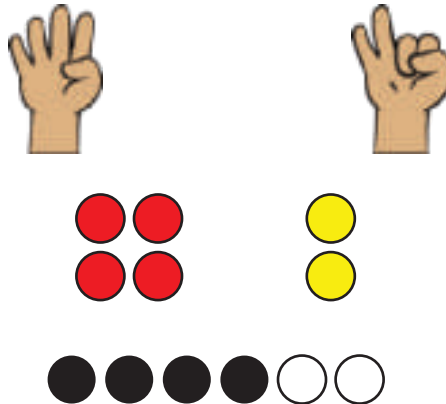


$$2 + 1$$



We used our fingers, objects, and drawings to find the value of expressions.

$$4 + 2$$



Lesson 18: Tell Story Problems for Expressions (Optional)

Standards Alignments

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

Teacher-facing Learning Goals

- Create a story problem that matches a given expression.
- Fill in an expression to match a story problem.

Student-facing Learning Goals

- Let's tell story problems to match expressions.

Lesson Purpose

The purpose of this lesson is for students to create story problems to match expressions and fill in expressions to match 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. Throughout the unit, students have acted out, told, and solved story problems and interpreted and found the value of expressions. In this lesson, students apply their understanding of story problems and expressions to create story problems that match a given expression. In the second activity, students share their story problems and other students figure out which expression they were making a story problem for. When students make choices and translate mathematics back into the context of a real world situation, they model with mathematics (MP4).

Access for:



Students with Disabilities

- Engagement (Activity 1)



English Learners

- MLR8 (Activity 1)

Instructional Routines

Choral Count (Warm-up)

Materials to Gather

- Materials from previous centers: Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min
Activity 2	20 min
Activity 3	15 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 upon in the next unit?

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

🕒 0 min

Unit 4, Section C Checkpoint

Standards Alignments

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

Student-facing Task Statement

Lesson observations

Student Responses

- Explain how an expression connects to a drawing or story problem.

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

🕒 10 min

Choral Count: To 50, Count On

Standards Alignments

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

The purpose of this warm-up is to extend the verbal count sequence to 50 and to count on from a

given number. As students count, point to the numbers posted so that students can follow along. If students struggle to count on, consider asking “What number comes after 4?” or providing a running start by counting “1, 2, 3...” and having students continue the count.

Instructional Routines

Choral Count

Student Responses

- Students say the count sequence to 50.
- Students count from 4 to 20.

Launch

- “Let’s count to 50.”
- Count to 50.
- Repeat 1-2 times.

Activity

- “Let’s practice counting on. Start at 4 and count up to 20.”
- Count on from 4 to 20.
- Repeat 3–4 times starting with other numbers within 20.

Synthesis

- “If we wanted to count on from 5 to 20, what number would we say after 5? How do you know?” (6 because 6 is one more than 5 and comes after 5 when we count.)

Activity 1

🕒 10 min

Tell a Story Problem to Match an Expression

Standards Alignments

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

The purpose of this activity is for students to tell a story problem that matches a given expression.

Access for English Learners

MLR8 Discussion Supports. Invite students to use gestures with verbal descriptions and drawings to tell the story problem.

Advances: Listening, Representing, Speaking, Conversing

Access for Students with Disabilities

Engagement: Internalize Self-Regulation. Provide students an opportunity to self-assess and reflect on their story problem. For example, their story problem should have a question and the numbers should match the ones in their expression.

Supports accessibility for: Organization, Memory, Attention

Student-facing Task Statement



Student Responses

Sample responses:

- $3 + 4$
 - There were 3 people waiting at the bus stop. 4 more people came to the bus stop. How many people are waiting at the bus stop now?
- $7 - 5$
 - There were 7 apples in the fruit bowl. Diego took 5 of the apples. How many apples are left in the fruit bowl?

Launch

- Groups of 2
- "Think of one expression. You can think of an addition expression or a subtraction expression."
- 1 minute: independent work time
- "Share your expression with your partner. Write the expression that your partner shares in the box."
- 2 minutes: partner discussion

Activity

- "Think of a story problem that goes with the expression that you wrote in the box. Remember that a story problem should have a question at the end. You can draw pictures or write words and numbers in your workbook to help you remember what happens in your story problem."
- 3 minutes: independent think time
- "Share your story problem with your partner. Does their story match their expression?"

- 3 minutes: partner discussion

Synthesis

- “In the next activity, we will share our story problems with the whole class.”

Activity 2

🕒 20 min

Story Problem and Expression Gallery Walk

Standards Alignments

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

The purpose of this activity is for students to share story problems and figure out which expression matches a given story problem.

Student-facing Task Statement

_____ + _____	_____ + _____
_____ - _____	_____ - _____
_____ + _____	_____ + _____
_____ - _____	_____ - _____
_____ + _____	_____ + _____
_____ - _____	_____ - _____

Student Responses

Answers vary.

Launch

- Groups of 2
- “We’re going to do a gallery walk to hear the story problems that everyone created.”
- “As you walk around, fill in an expression for each story problem that you hear.”

Activity

- Invite half of the class to stand and share their story problems while the other half of the class walks around.
- 7 minutes: gallery walk
- Switch groups.
- 7 minutes: gallery walk

Synthesis

- Invite 1-2 students to share their story problems.
- “What expression goes with their story problem? How do you know?”
- “What in the story helped you figure out that you needed an addition/subtraction expression?”

Activity 3

🕒 15 min

Centers: Choice Time

The purpose of this activity is for students to choose from activities that offer practice with addition and subtraction story problems and expressions, as well as writing numbers. Students choose from any stage of previously introduced centers.

- Find the Value of Expressions
- Roll and Add
- Shake and Spill
- Number Race
- Math Stories

Materials to Gather

Materials from previous centers

Required Preparation

- Gather materials from:
 - Find the Value of Expressions, Stage 1
 - Roll and Add, Stages 1 and 2
 - Shake and Spill, Stages 1-3
 - Number Race, Stage 1
 - Math Stories, Stages 1 and 2

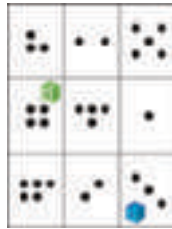
Student-facing Task Statement

Choose a center.

Find the Value of Expressions

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

Roll and Add



Shake and Spill



Math Stories



Number Race



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

- “What centers are you looking forward to working with during the next unit? What kind of new centers do you hope to play?”

Lesson Synthesis

🕒 5 min

“In this unit, we learned about addition and subtraction with objects, drawings, story problems, and expressions. What can you teach another student about addition and subtraction?”



Family Support Materials

Family Support Materials

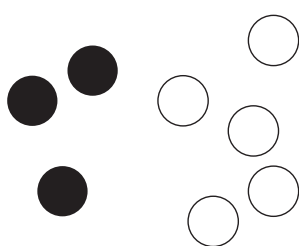
Understanding Addition and Subtraction

In this unit, students relate counting to addition to solve addition and subtraction story problems within 10.

Section A: Count to Add and Subtract

In this section, students are introduced to addition as counting the total number of objects in two groups. The language “add”, “put together”, “subtract”, and “take away” is used throughout the section.

Students also count images in scattered configurations for the first time, recognizing the need to keep track of the images they have counted. For example, students may count all the black dots first and then the white dots, or they may count the black dots and white dots together.



Students may cross off the dots as they count to keep track of the dots they have counted. Students see that although they may count the images in a different order, they arrive at the same total.

Section B: Representing and Solving Story Problems

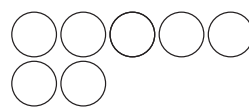
In this section, students represent and solve story problems. This work starts slowly, with students acting out and then

representing story problems that don't have a question in them such as:

There were 5 students jumping rope at recess. 2 more students came out to play with them.

Questionless story problems encourage students to think about the context and the action in the story problem without feeling pressured or rushed to solve the problem. Eventually, students answer questions such as "How many students are jumping rope now?" about stories.

Students represent story problems with objects, math tools, drawings and numbers. They may represent each story problem in any way that makes sense to them. The important thing is for students to be able to explain how their representation connects to the story. While students are not required to create drawings in a particular way, they notice that organized drawings make it easier to see how the drawing matches the story problem. For example, the students may use any of these diagrams to represent a story that matches the expression $5 + 2$.



Section C: Addition and Subtraction Expressions

In this section, students work with expressions for the first time. They match expressions to story problems and drawings.

Students explain why an expression matches a given problem or drawing.

Students move from working with expressions in relation to story problems to finding the value for expressions without a story. Students may add or subtract in a way that makes sense to them, including using fingers, objects, or drawings. With repeated experience, students begin to notice patterns when adding and subtracting, such as that adding 1 results in the next counting number and that adding 0 results in the same number.

Try it at home!

Near the end of the unit, ask your student to draw a picture that goes with this story:

There were 4 students jumping rope at recess.
2 more students came out to play with them.

Questions that may be helpful as they work:

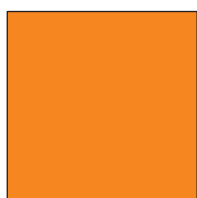
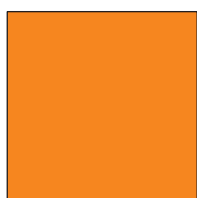
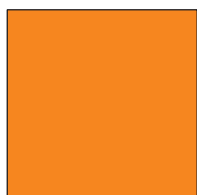
- Explain your picture to me.
- How many students are jumping rope in the end?
- Does this story match the expression $4 + 6$, $6 + 2$ or $4 + 2$?
How do you know?

Unit Assessments

End-of-Unit Assessment

Understanding Addition and Subtraction: End-of-Unit Assessment

1. How many shapes are there?



2. There are 3 stickers on the book.

Then Jada puts 2 more stickers on the book.

How many stickers are on the book now?

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

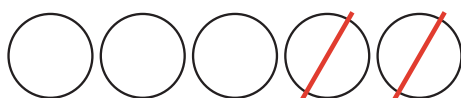
3. There are 6 kids playing in the park.

2 of the kids leave the park to go home.

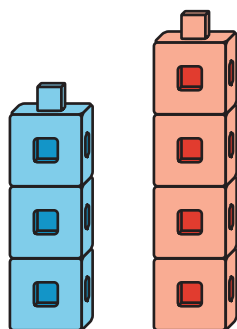
How many kids are playing in the park now?

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

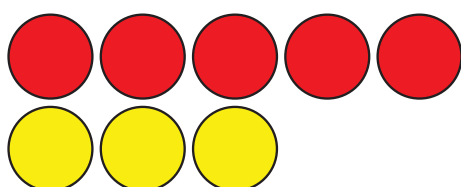
4. Draw a line to match each picture with the expression it shows.



$$3 + 4$$



$$5 + 3$$



$$5 - 2$$

5. Write the value of each expression.

a. $2 + 3$ _____

b. $8 - 1$ _____

c. $3 + 0$ _____

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.

- Understand addition as putting together and subtraction as taking from.
 - Keep track of which objects or images have been counted.
 - Count to find the total or difference.
 - Add or take away objects to represent addition and subtraction.

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.

- Represent and solve Add To, Result Unknown and Take From, Result Unknown story problems within 10.
 - Accurately retell a story problem in their own words.
 - Understand the action in a story problem and act it out or demonstrate it with objects or drawings.
 - Use objects or drawings to represent a story problem.
 - Explain how objects or drawings represent 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.

- Relate addition and subtraction expressions to story problems.
 - Explain how an expression connects to a drawing or story problem.
 - Fill in an expression to represent a drawing.
- Find the value of addition and subtraction expressions within 5.
 - Use fingers, objects, or drawings to find the value of an expression.
 - Count all to determine the total when 0 or 1 are added.
 - Use knowledge of the count sequence to determine the total when 1 is added.

Assessment: End-of-Unit Assessment

Teacher Instructions

Give students access to 5-frames and connecting cubes or two-color counters.

Problem 1

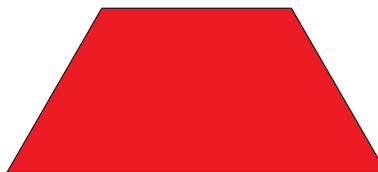
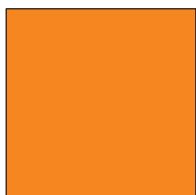
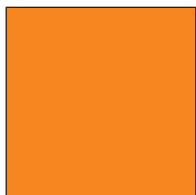
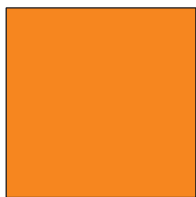
Standards Alignments

Addressing K.CC.B

Narrative

Students count 2 sets of objects, in this case squares and trapezoids. While they are not asked to identify the count with the operation of addition, accurately counting 2 sets of objects is a vital skill before thinking about the count as representing addition. Students who answer 3 or 4 may have misinterpreted the question as asking for the number of squares or trapezoids respectively.

How many shapes are there?



Solution

7

Problem 2

Standards Alignments

Addressing K.OA.A.2

Narrative

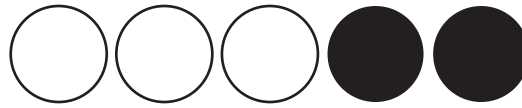
Students solve an Add To, Result Unknown story problem. Students may use objects to represent and solve the problem or they may make a drawing. The provided drawing distinguishes the 3 stickers that were first on the book and the 2 more that Jada put on the book by using different colors. Students may distinguish them by physically separating them or they might not distinguish them, that is, they might draw 3 circles and 2 more that are all together.

There are 3 stickers on the book.
Then Jada puts 2 more stickers on the book.
How many stickers are on the book now?

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

Solution

5 stickers
Sample response:



Problem 3

Standards Alignments

Addressing K.OA.A.2

Narrative

Students represent and solve a Take From, Result Unknown story problem. Students may use objects to represent and solve the problem. The drawing provided shows the 6 circles representing the kids playing in the park and then two of them are crossed out representing the two kids who go home. Students may represent the kids going home by using color or separating them from the others. Unlike the previous item where the picture solves the problem even if it is not organized, in this case an appropriate picture needs to distinguish the two kids who are going home from the 4 who are staying in order to help solve the problem. It won't always be possible, from the written student work, to determine how a student envisions their drawing representing the story. In these cases, a personal interview may be needed.

There are 6 kids playing in the park.
 2 of the kids leave the park to go home.
 How many kids are playing in the park now?

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

Solution

4 kids.
 Sample response:



Problem 4

Standards Alignments

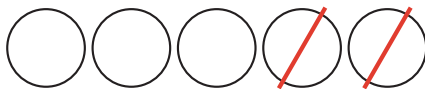
Addressing K.OA.A.1

Narrative

Students match pictures with expressions. All 3 pictures have a 3 in them, though in one case 3 is the result of the operation, and both the red counters and the circles are in a group of 5. Students may confuse the counters and the connecting cubes if they do not count carefully. Students who do not identify the matching image for the subtraction expression may need more work identifying or understanding the meaning of the sign.

Draw a line to match each picture with the expression it shows.

A.



1.

$3 + 4$

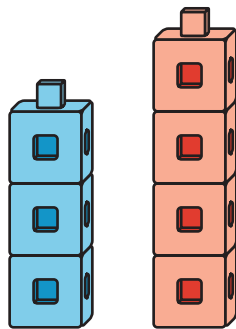
2.

$5 + 3$

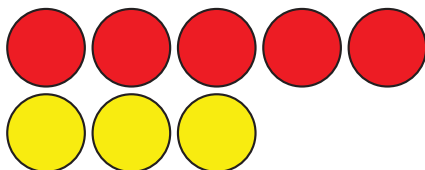
3.

$5 - 2$

B.



C.

**Solution**

- A: 3

- B: 1
- C: 2

Problem 5

Standards Alignments

Addressing K.OA.A.1

Narrative

Students add and subtract within 10. They are given expressions, rather than a story or pictures, so this item focuses on student ability to interpret the + and – signs as well as their ability to do arithmetic within 10.

Write the value of each expression.

a. $2 + 3$ _____

b. $8 - 1$ _____

c. $3 + 0$ _____

Solution

a. 5

b. 7

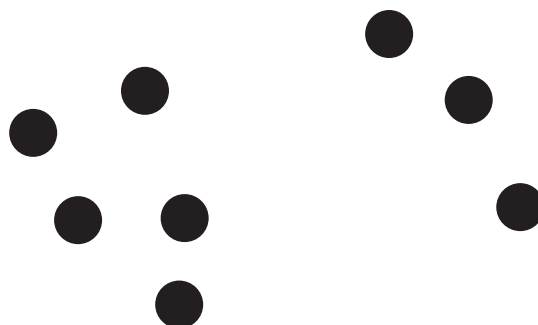
c. 3

Lesson Cool Downs

Lesson 3: Count 2 Groups of Scattered Images

Cool Down: How Many Dots?

How many dots are there?



There are

 dots.

Lesson 11: Drawings to Represent Story Problems

Cool Down: Represent and Solve a Story Problem

Han collected 4 leaves at the park.

Priya gave him 5 more leaves.

How many leaves does Han have now?

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

Lesson 16: Find the Value of Expressions

Cool Down: Find the Value of the Expression

Find the value of the expression.

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

$$1 + 4$$



Instructional Masters

Introduction Masters for Understanding Addition and Subtraction

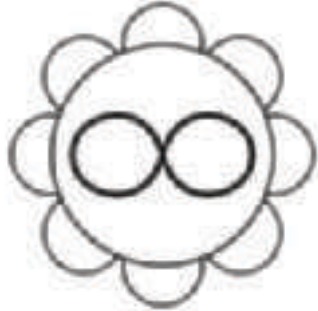

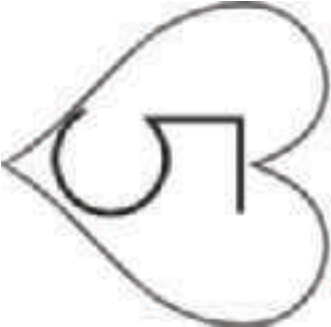

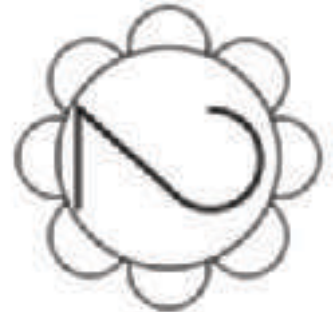

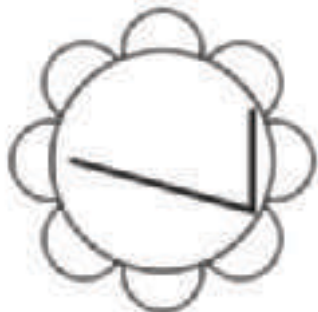

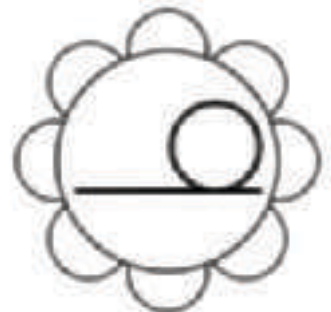
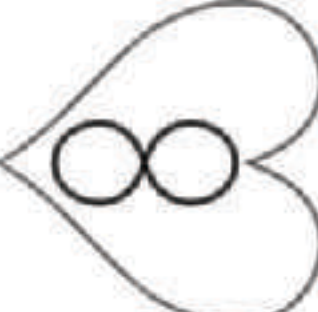

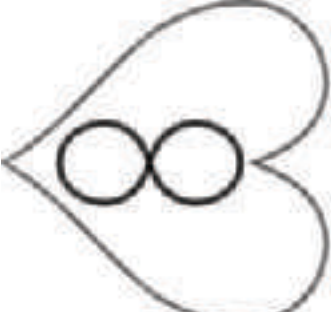
address	title	students written per copy	requires on?	card stock cutting? recommended?	color paper recommended?
Activity Kindergarten.4.17.3	Find the Value of Expressions within 10 Stage 1 Recording Sheet	1	yes	no	no
Center	Find the Value of Expressions within 10 Stage 1 Recording Sheet	1	yes	no	no
Activity Kindergarten.4.2.3	Roll and Add Stage 1 Recording Sheet	1	yes	no	no
Center	Roll and Add Stage 1 Recording Sheet	1	yes	no	no
Activity Kindergarten.4.10.3	Dot Mat 1-5 (dots and 5-frames)	2	no	no	no
Center	Dot Mat 1-5 (dots and 5-frames)	2	no	no	no
Activity Kindergarten.4.10.3	Bingo Stages 1-3 Gameboard	4	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no
Center	Bingo Stages 1-3 Gameboard	4	no	no	no
Activity Kindergarten.4.2.3	Roll and Add Stage 1 Dot Images Mat	1	no	no	no

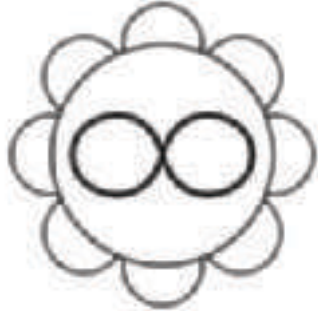

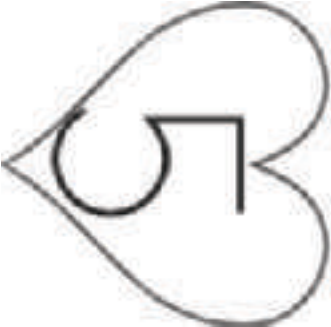

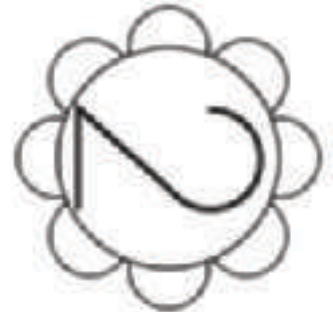

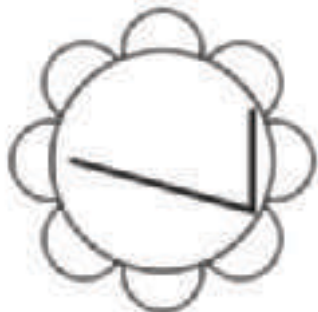

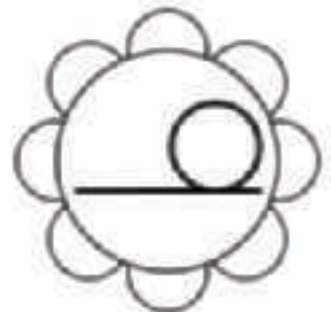

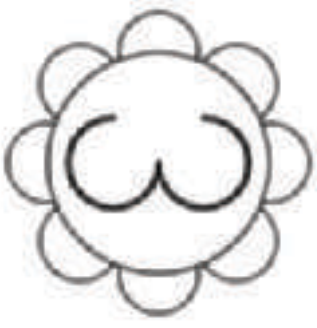
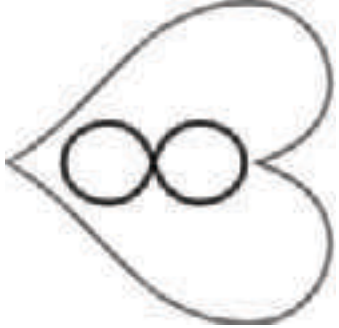
Center	Roll and Add Stage 1 Dot Images Mat	1	no	no	no	no	no
Activity Kindergarten.4.15.3	Shake and Spill Stage 3 Recording Sheet Kindergarten	1	yes	no	no	no	no
Center	Shake and Spill Stage 3 Recording Sheet Kindergarten	1	yes	no	no	no	no
Assessment Kindergarten.4	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.4.4.2	Number Mat 1-5	2	no	no	no	no	no
Activity Kindergarten.4.5.2	Number Mat 1-5	2	no	no	no	no	no
Activity Kindergarten.4.6.3	Number Mat 1-5	2	no	no	no	no	no
Activity Kindergarten.4.16.1	Number Mat 1-5	2	no	no	no	no	no
Center	Number Mat 1-5	2	no	no	no	no	no
Center	Number Mat 1-5	2	no	no	no	no	no
Center	Number Mat 1-5	2	no	no	no	no	no
Center	Number Mat 1-5	2	no	no	no	no	no
Activity Kindergarten.4.2.1	Dots on 5-Frame Cards (0-5)	1	no	yes	no	no	no
Assessment Kindergarten.4	Checkpoint	0	yes	no	no	no	no
Activity Kindergarten.4.7.1	Playing On the Playground	30	no	no	no	no	no
Activity Kindergarten.4.17.3	Find the Value of Expressions within 10 Stage 1 Cards	2	no	yes	no	no	no

Center	Find the Value of Expressions within 10 Stage 1 Cards	2	no	yes	no	no
Activity Kindergarten.4.17.1	Add 0 and 1 Mat	2	no	no	yes	no
Activity Kindergarten.4.7.3	Math Stories Stage 2 Backgrounds	6	no	no	no	no
Activity Kindergarten.4.13.3	Math Stories Stage 2 Backgrounds	6	no	no	no	no
Center	Math Stories Stage 2 Backgrounds	6	no	no	no	no
Assessment Kindergarten.4	Checkpoint	0	yes	no	no	no
Activity Kindergarten.4.2.WU	Questions About Us Chart 5-Frame Template	1	no	no	no	no
Activity Kindergarten.4.4.WU	Questions About Us Chart 5-Frame Template	1	no	no	no	no
Activity Kindergarten.4.10.WU	Questions About Us Chart 5-Frame Template	1	no	no	no	no
Activity Kindergarten.4.13.WU	Questions About Us Chart 5-Frame Template	1	no	no	no	no
Activity Kindergarten.4.9.3	Math Fingers Stage 3 Recording Sheet	1	yes	no	no	no
Center	Math Fingers Stage 3 Recording Sheet	1	yes	no	no	no
Activity Kindergarten.4.13.3	Math Stories Stage 2 Recording Sheet	2	yes	no	no	no
Center	Math Stories Stage 2 Recording Sheet	2	yes	no	no	no
Activity Kindergarten.4.16.1	Roll and Add Stage 2 Recording Sheet	1	yes	no	no	no

Center	Roll and Add Stage 2 Recording Sheet	1	yes	no	no	no
Center	Number Mat 1-10	2	no	no	no	no
Center	Number Mat 1-10	2	no	no	no	no
Center	Math Libs Scenes	2	yes	no	no	no
Center	5-Frame	1	no	no	yes	no
Center	5-Frame	1	no	no	yes	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	Build Shapes Stage 1 and 2 Cards	2	no	yes	no	no
Center	Build Shapes Stage 1 and 2 Cards	2	no	yes	no	no
Center	Counting Collections 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 Fingers Cards	2	no	yes	no	no
Center	Math Fingers Cards	2	no	yes	no	no
Center	Bingo Stage 1 Cards	4	no	yes	no	no
Center	Number Race Stage 1 Recording Sheet for Writing	1	yes	no	no	no
Center	Number Race Stage 1 Recording Sheet for Tracing	1	yes	no	no	no

Center	Shake and Spill Stage 3 Recording Sheet Grade 1	1	yes	no	no	no
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1.

2.

3.

4.

5.

Roll and Add Stage 1 Recording Sheet

6.

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10.

1.

2.

3.

4.

5.

Roll and Add Stage 1 Recording Sheet

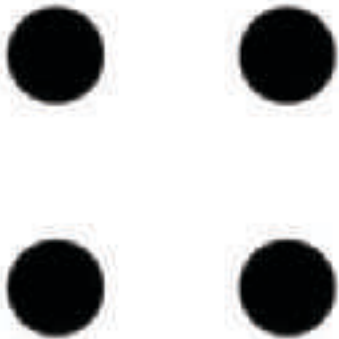

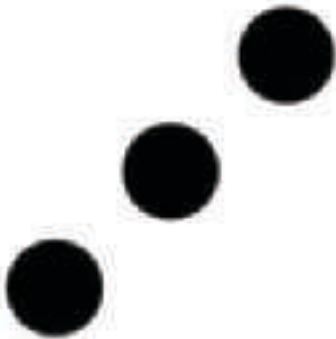
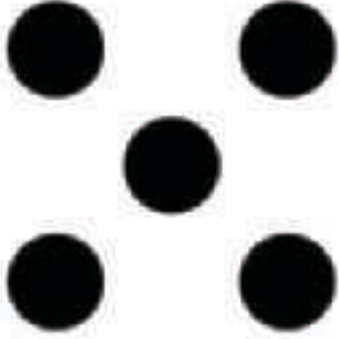

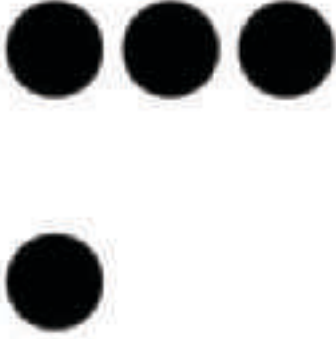
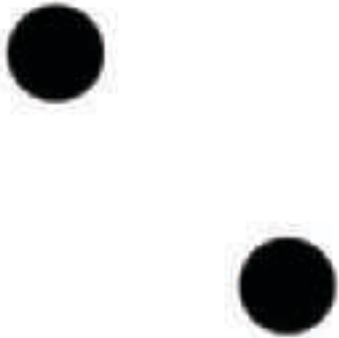
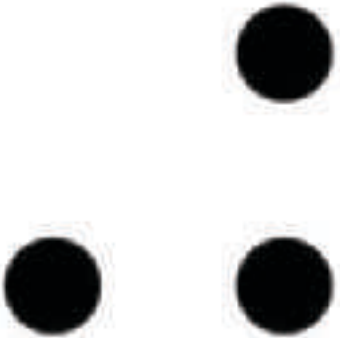

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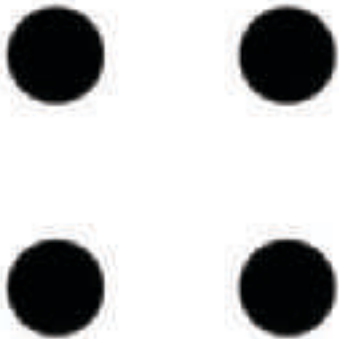

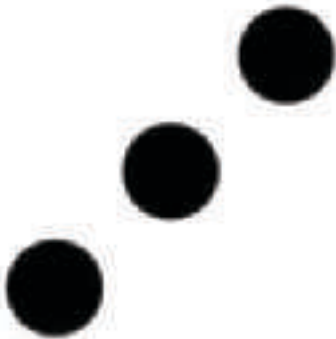
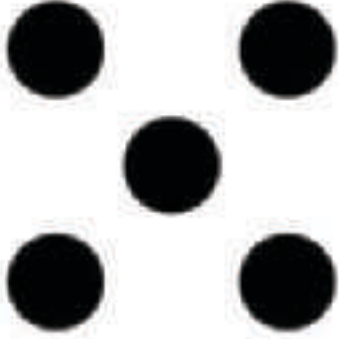

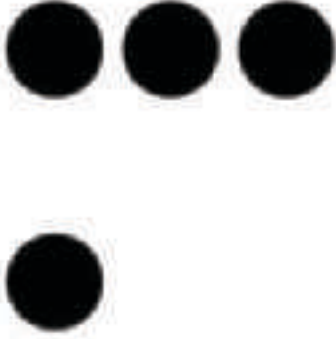
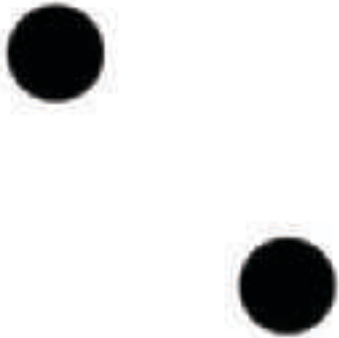
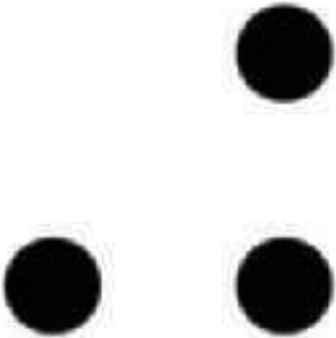

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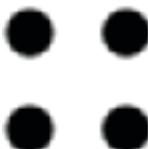



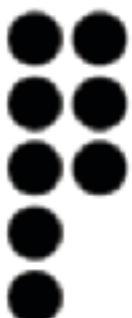



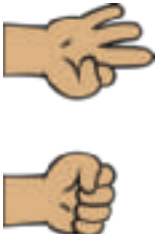
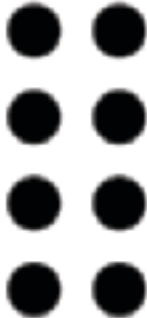




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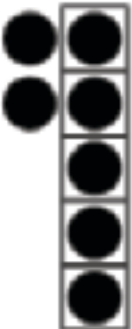





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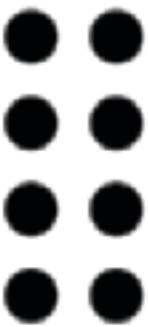




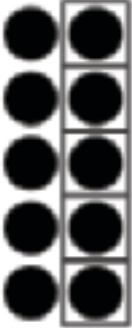




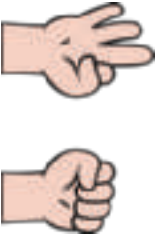
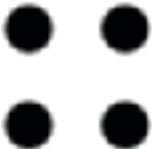
		
		
		


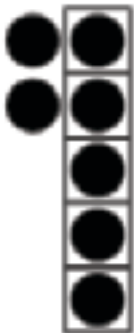



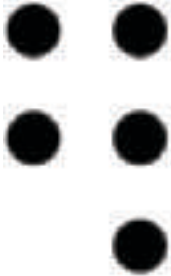
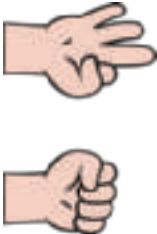



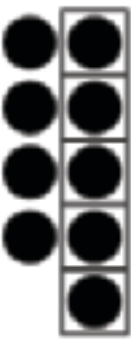

			
			
			
			



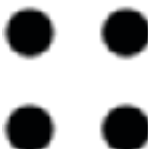



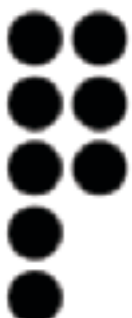



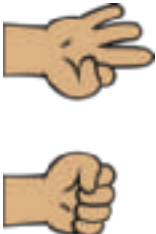
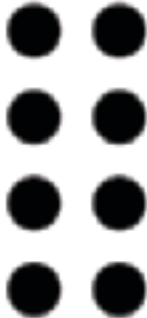




Bingo Stages 1-3 Gameboard











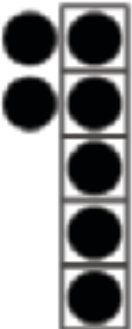





Bingo Stages 1-3 Gameboard

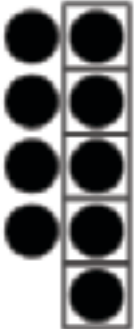



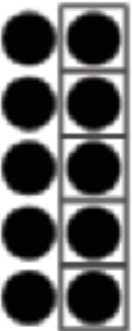


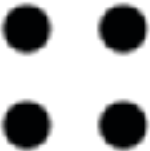
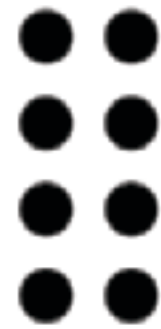



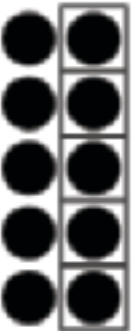


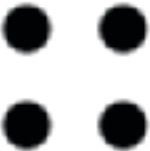
			
			
			


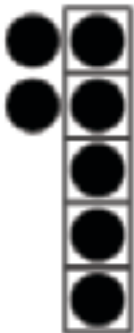

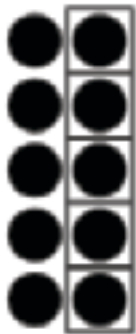
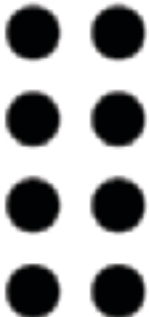

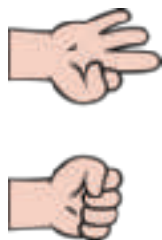


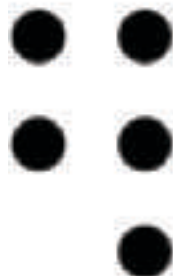




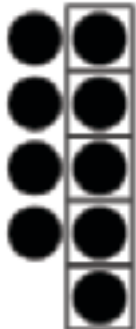

Bingo Stages 1-3 Gameboard



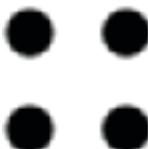



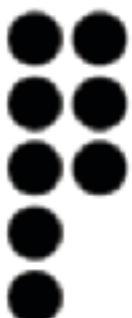



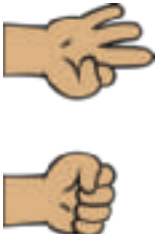
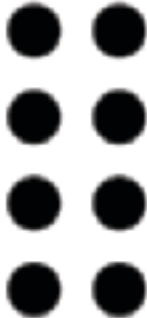




			
			
			
			

Bingo Stages 1-3 Gameboard











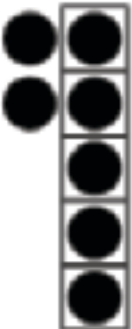





	
	
	
	
	
	
	
	




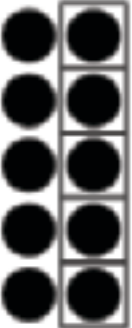
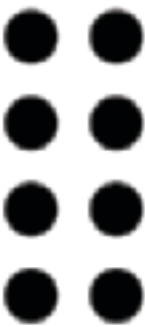








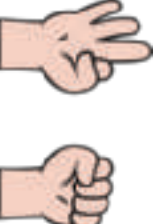

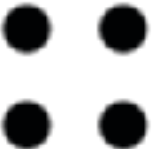
Bingo Stages 1-3 Gameboard




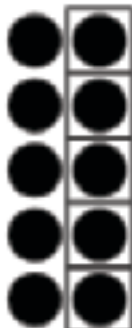


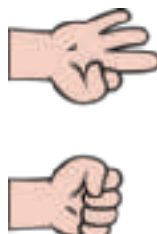









			
			
			
			



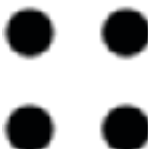



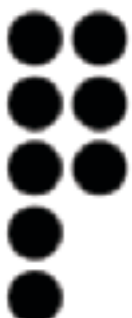



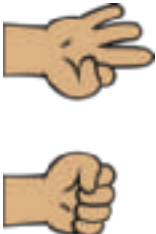
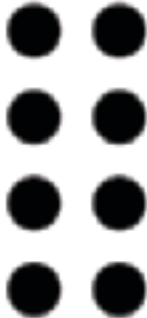




			
			
			
			

Bingo Stages 1-3 Gameboard











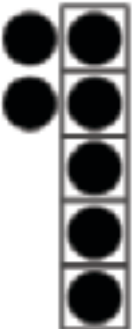





			
			
			
			




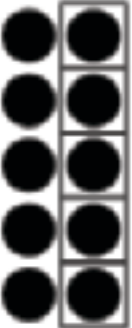
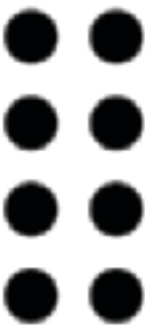








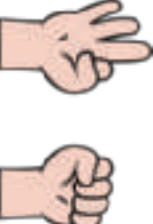

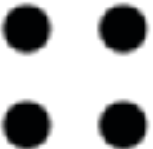
			
			
			
			




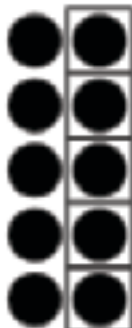


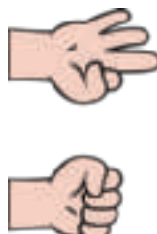









			
			
			
			

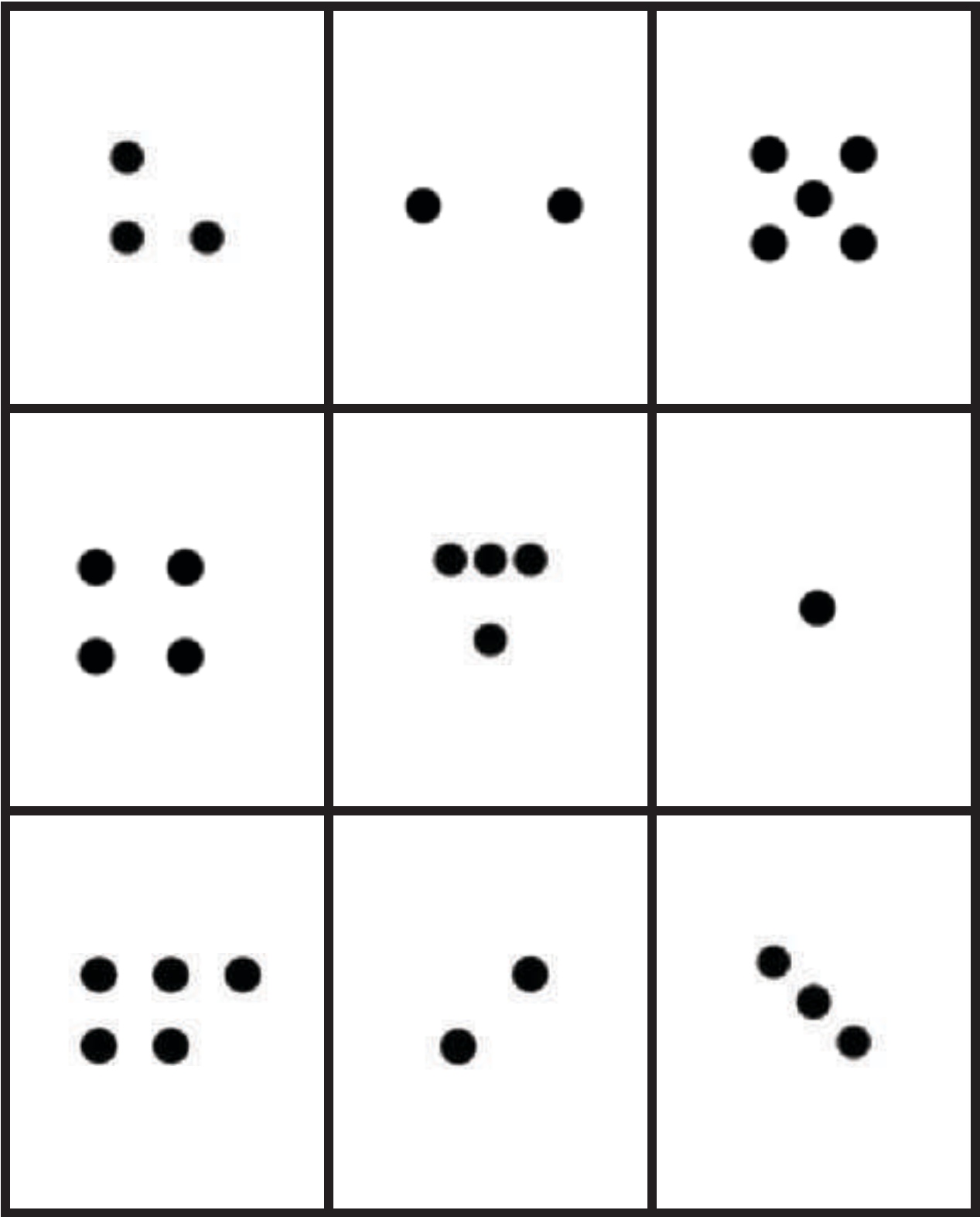
Bingo Stages 1-3 Gameboard

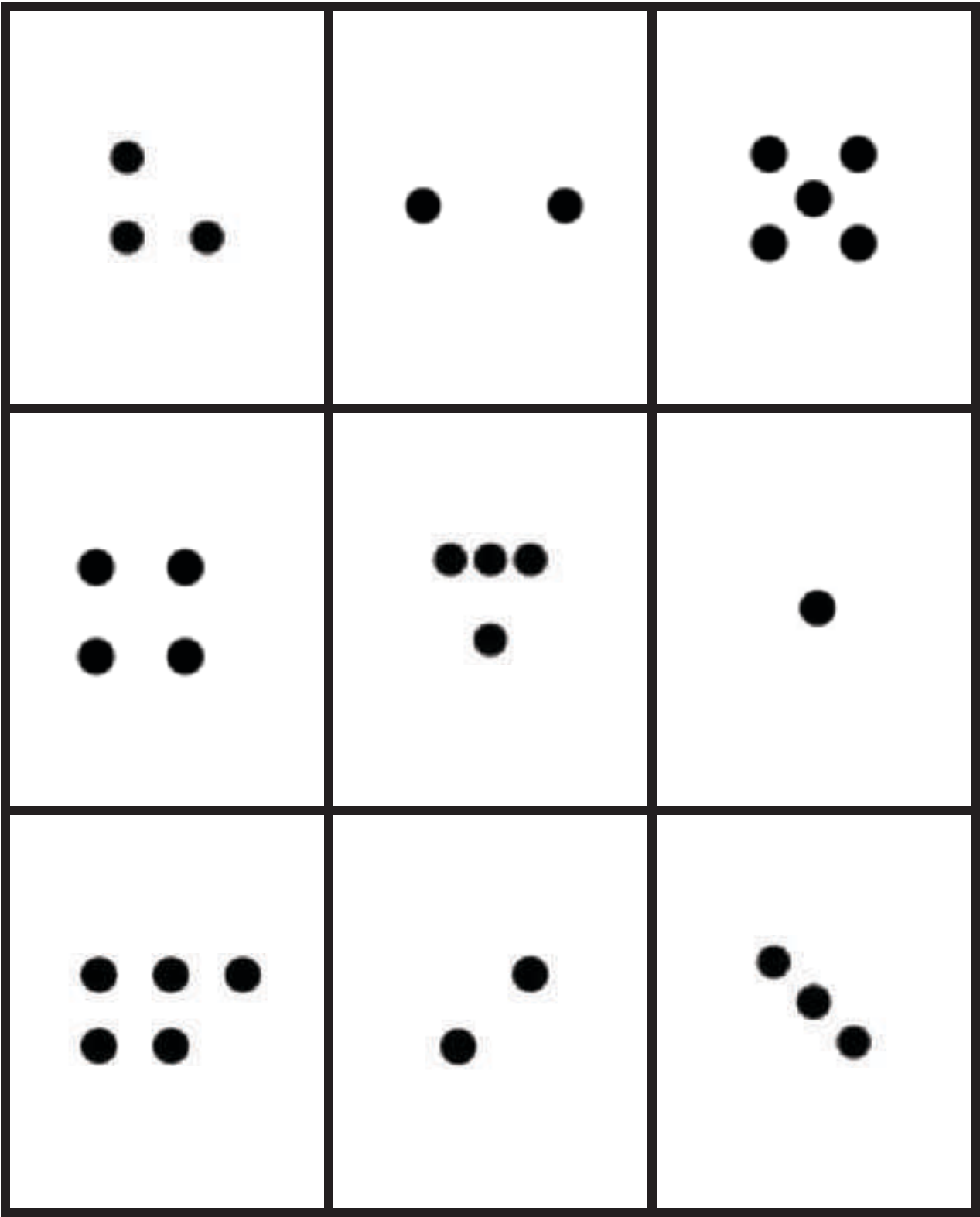
			
			
			
			

Bingo Stages 1-3 Gameboard





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 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.

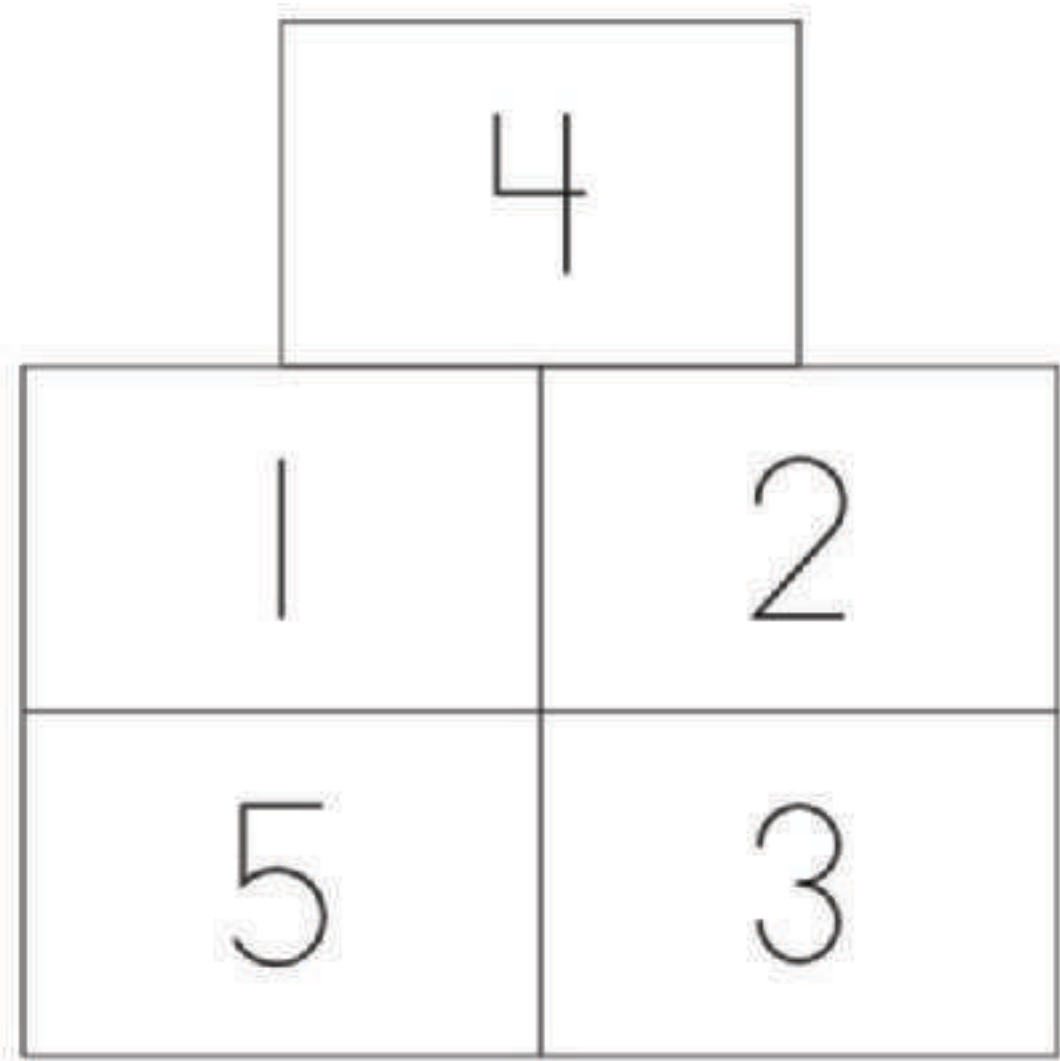
Fill in the expression.

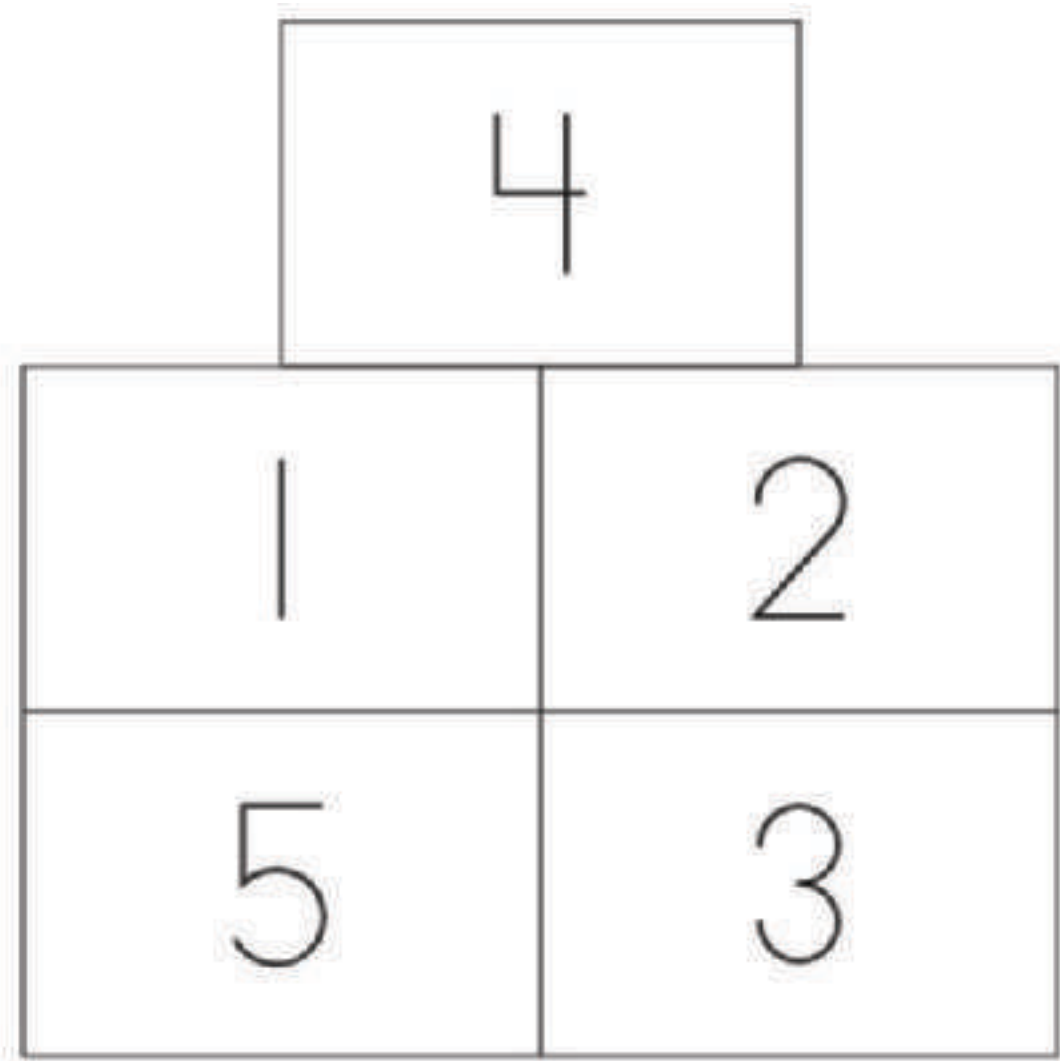
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

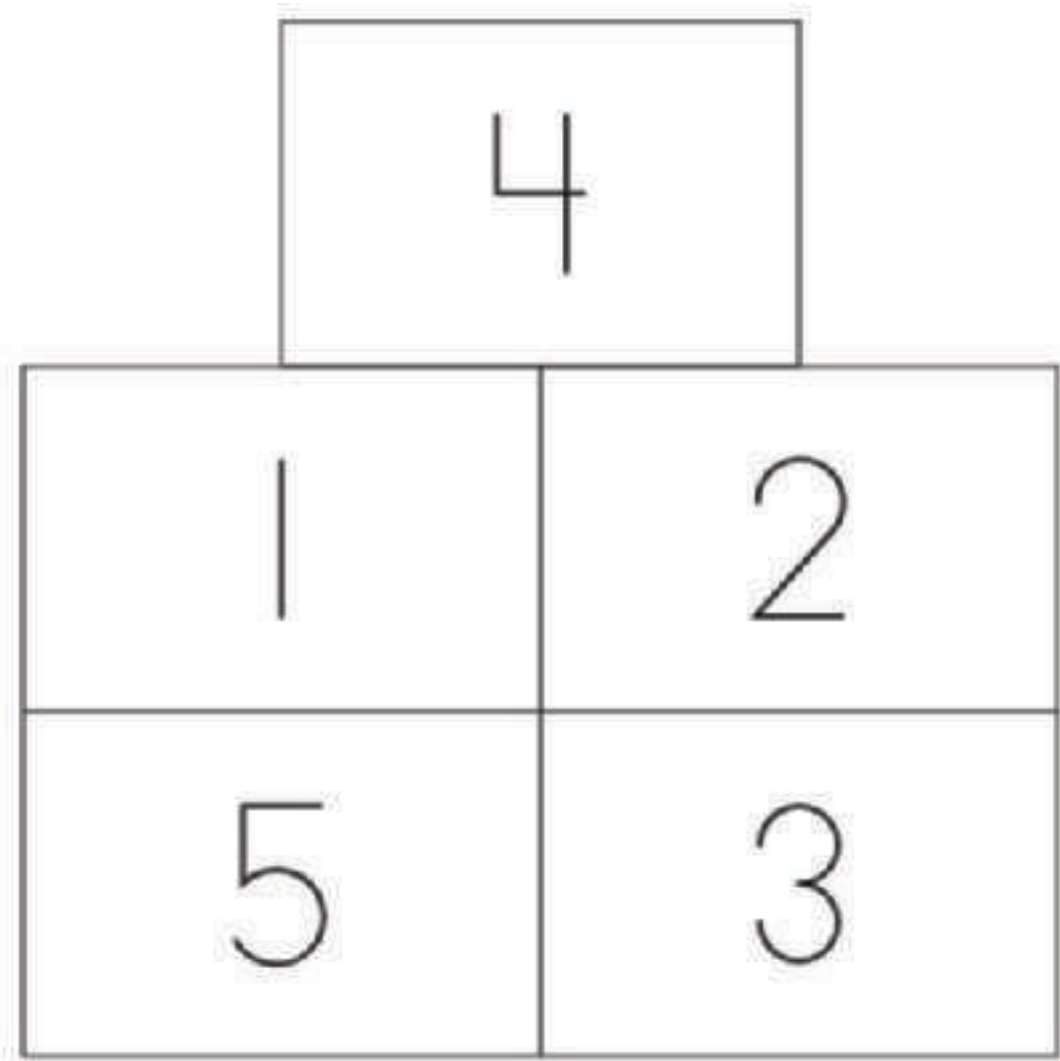
Draw a picture.

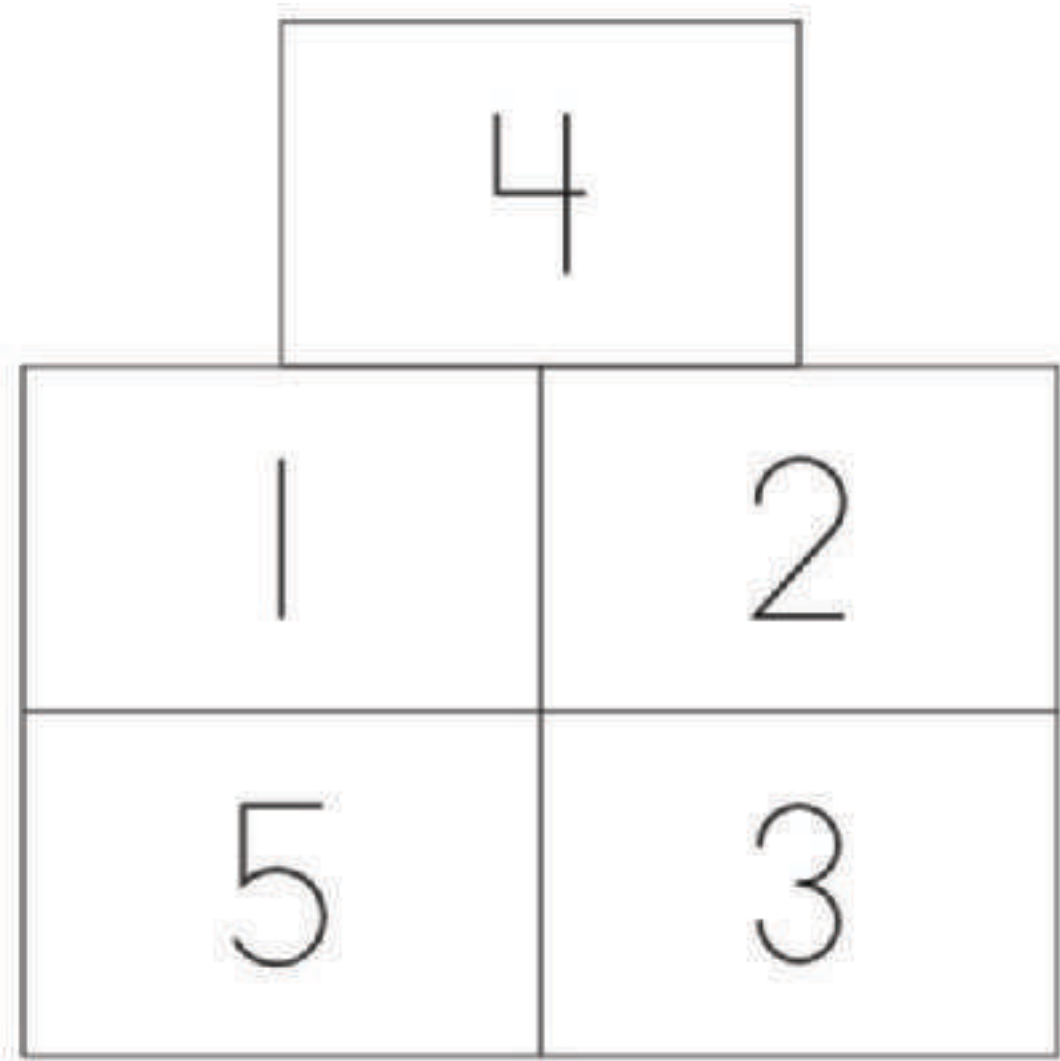
Fill in the expression.

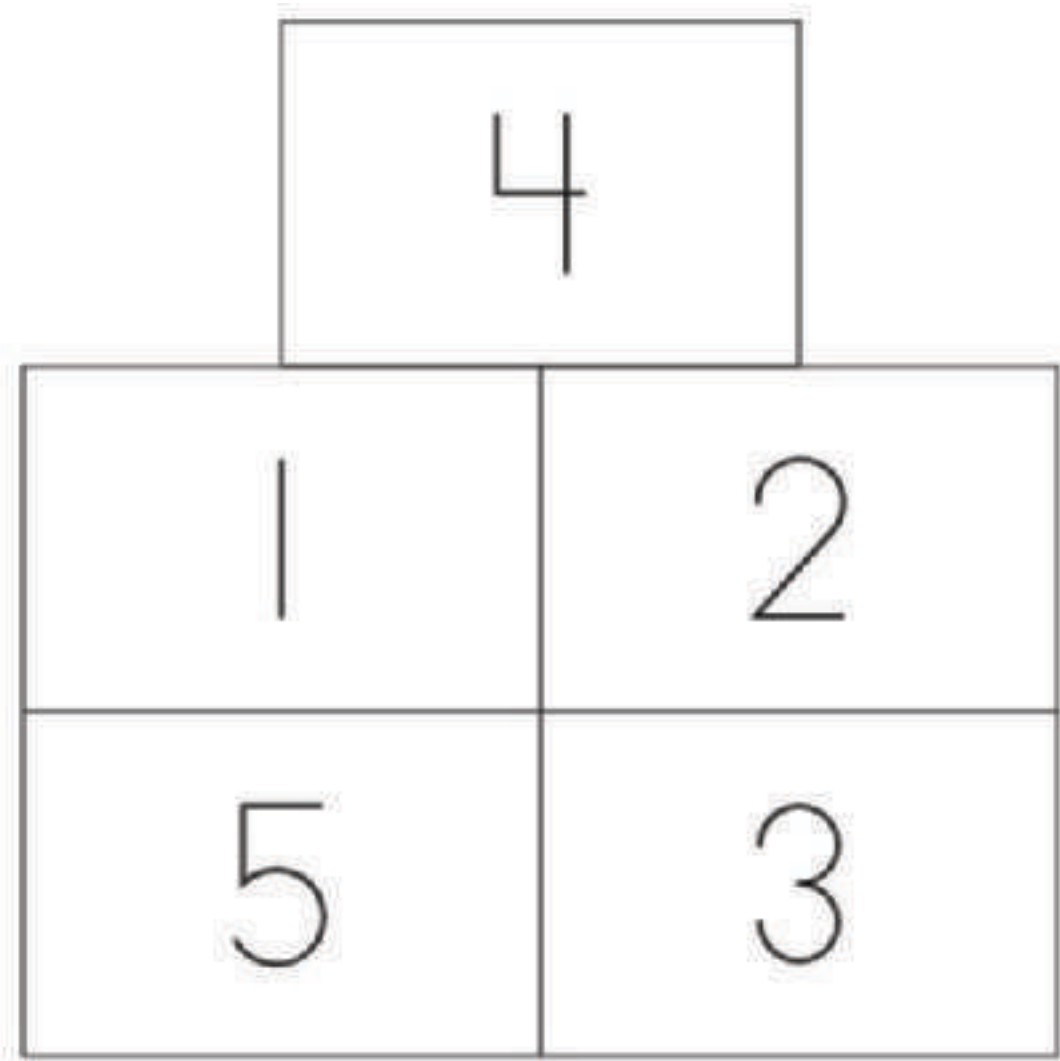
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

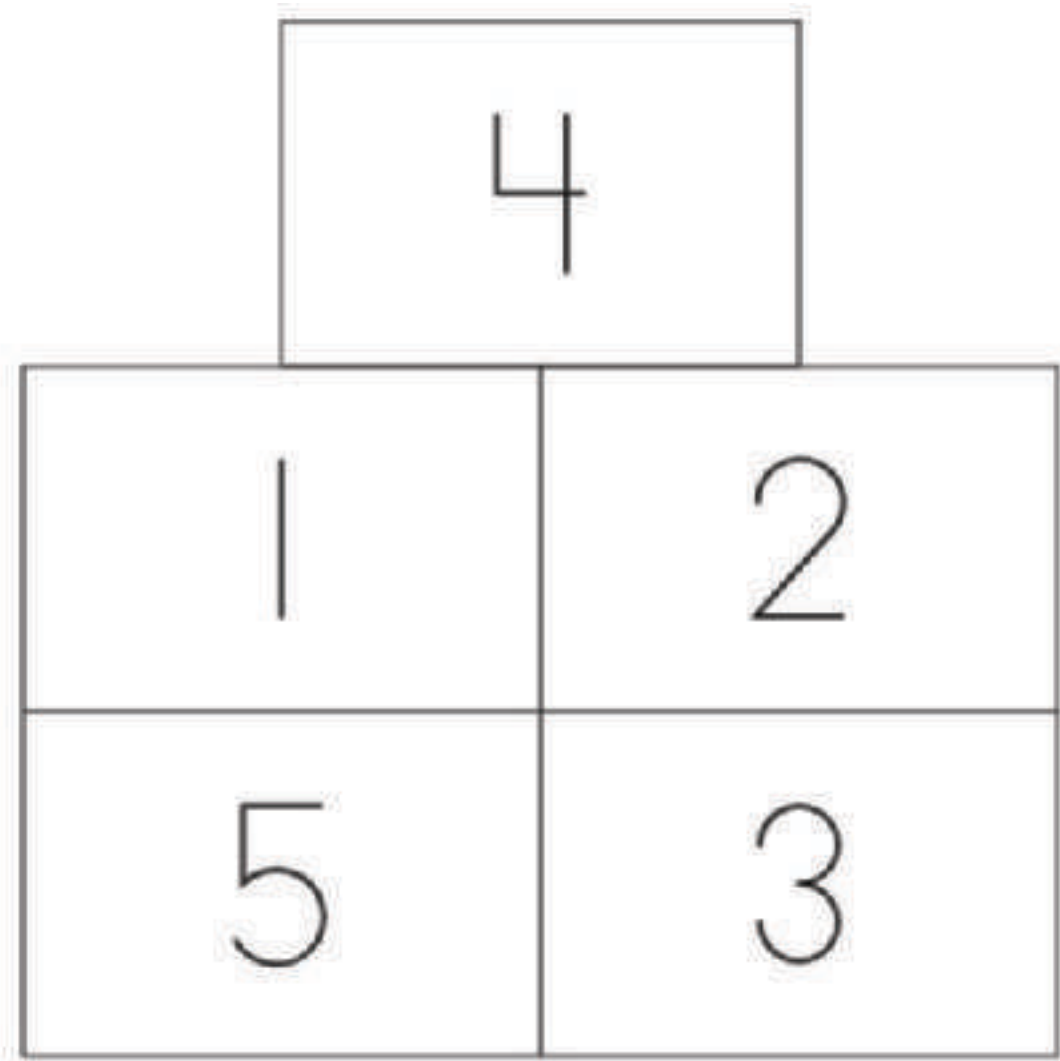


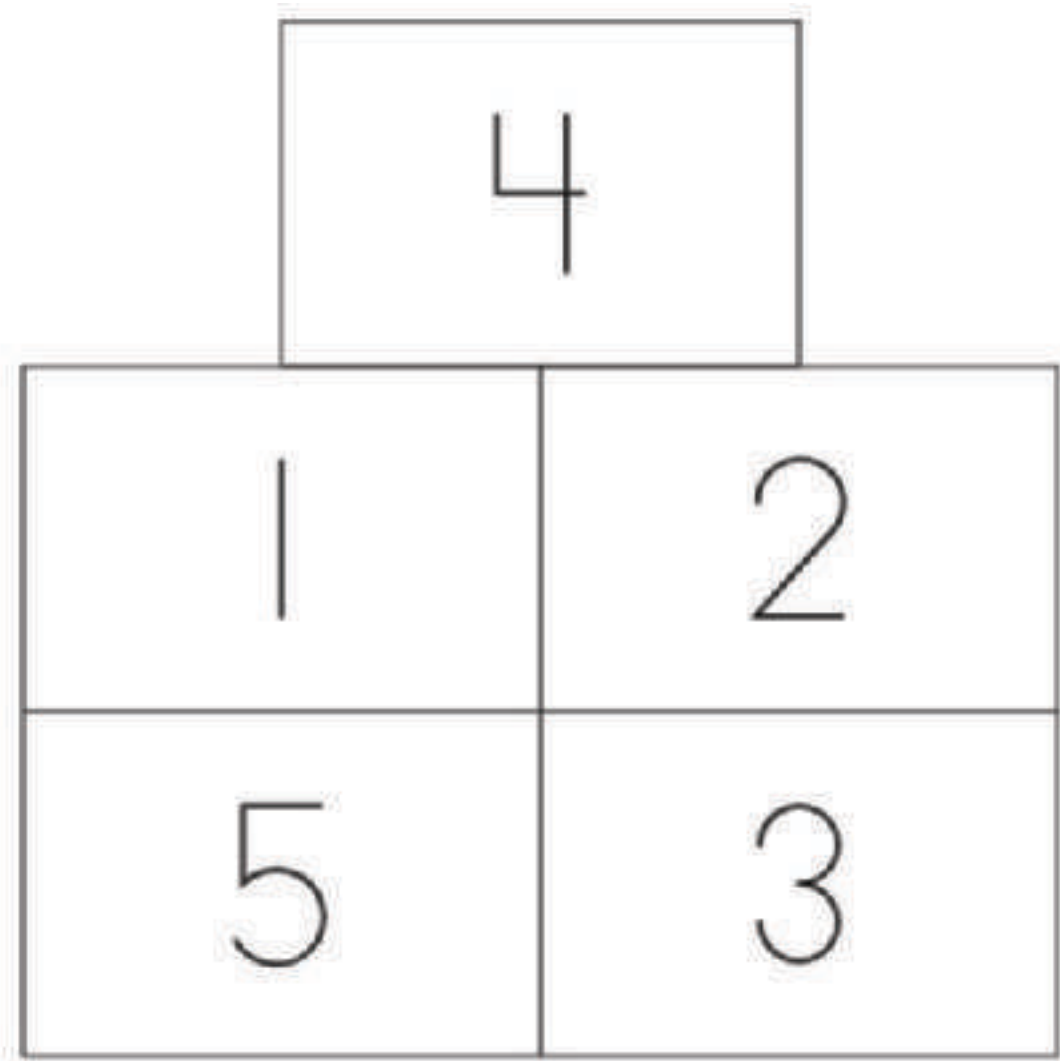


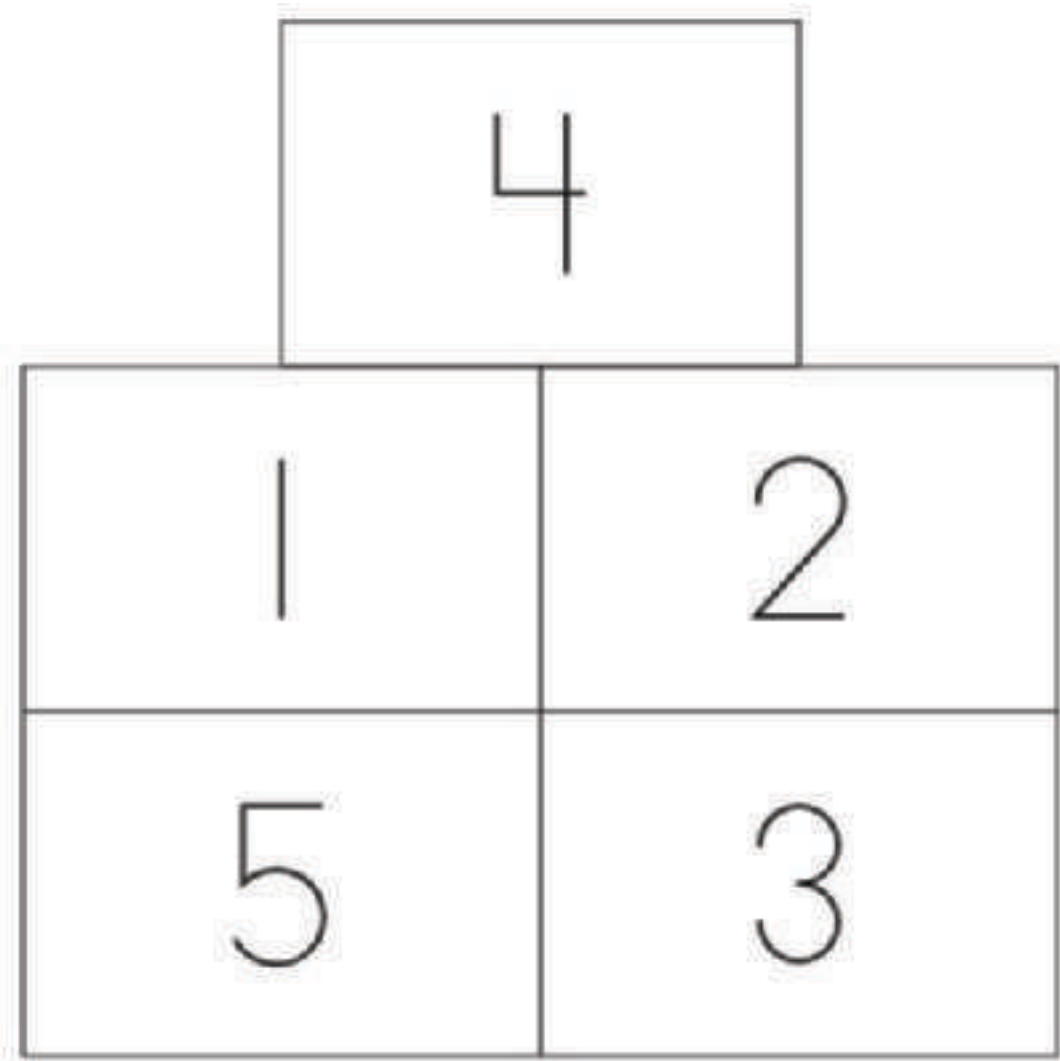












Dots on 5-Frame Cards (0-5)

Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)



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Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)



Dots on 5-Frame Cards (0-5)

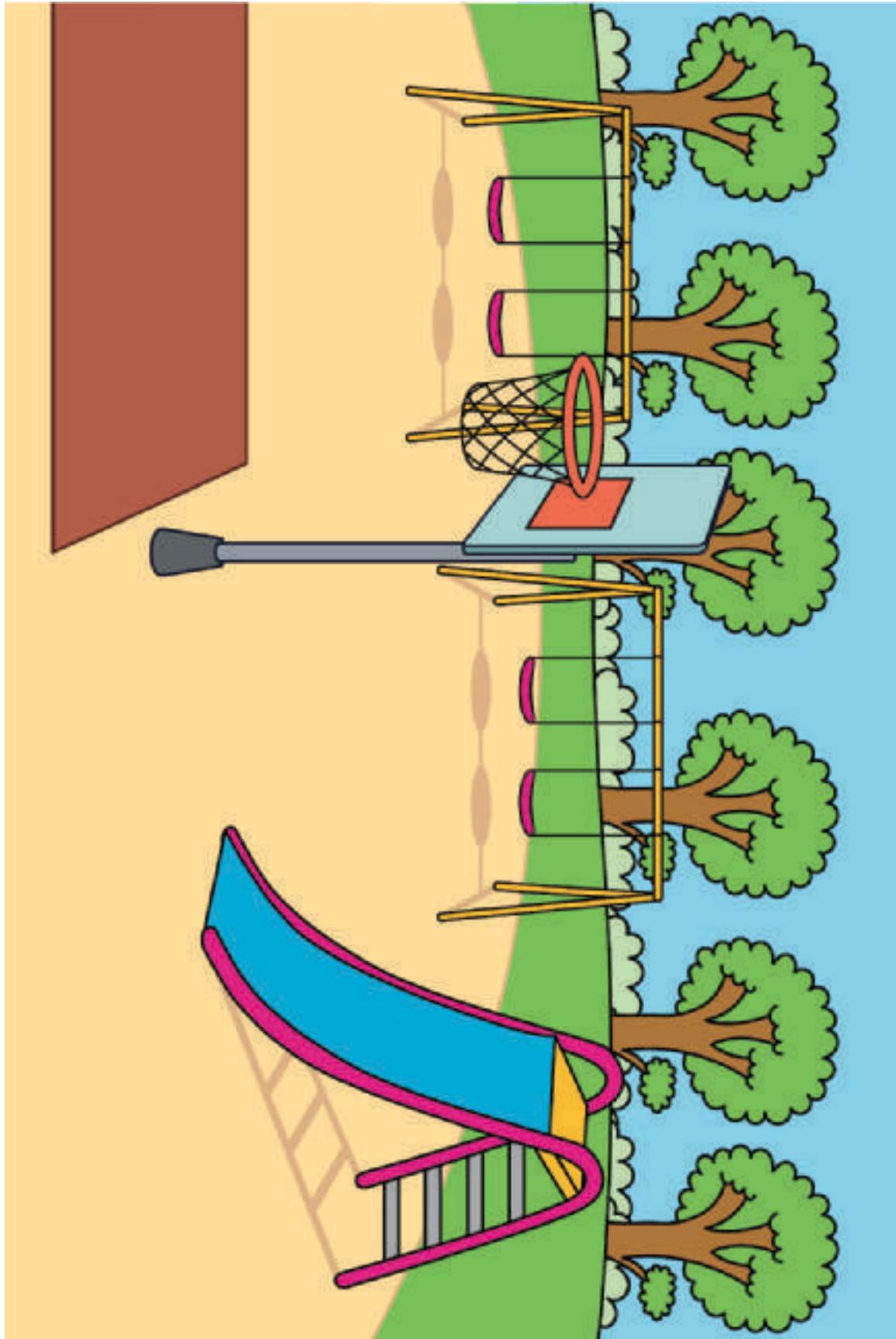


Checkpoint

Kindergarten, Unit 4 Section B Checkpoint

- Represent and solve Add To, Result Unknown and Take From, Result Unknown story problems within 10.

[illegible]



Playing On the Playground



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

$$8 - 4$$

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

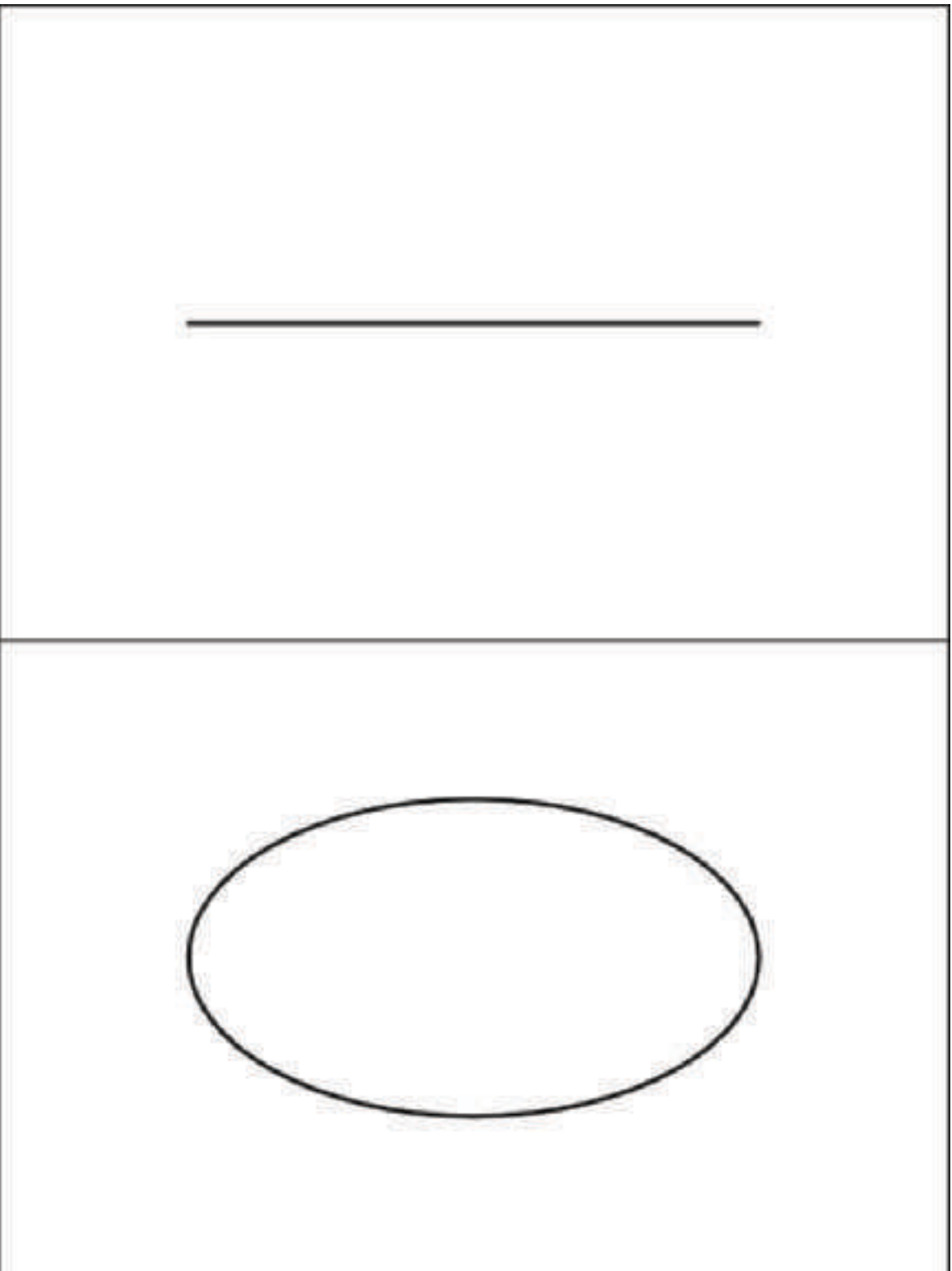
$$10 - 2$$

Find the Value of Expressions

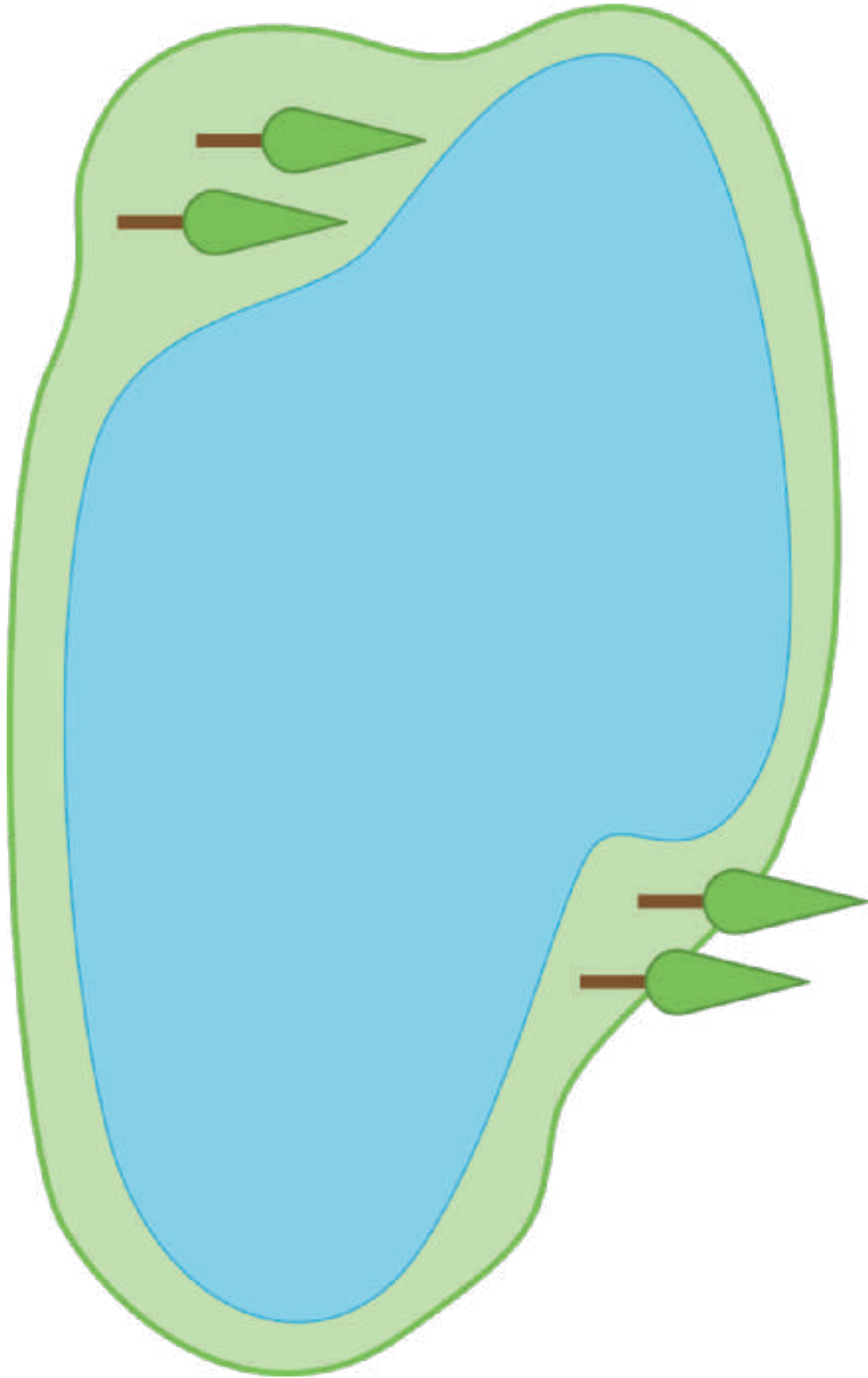
$$8 + 1$$

Find the Value of Expressions

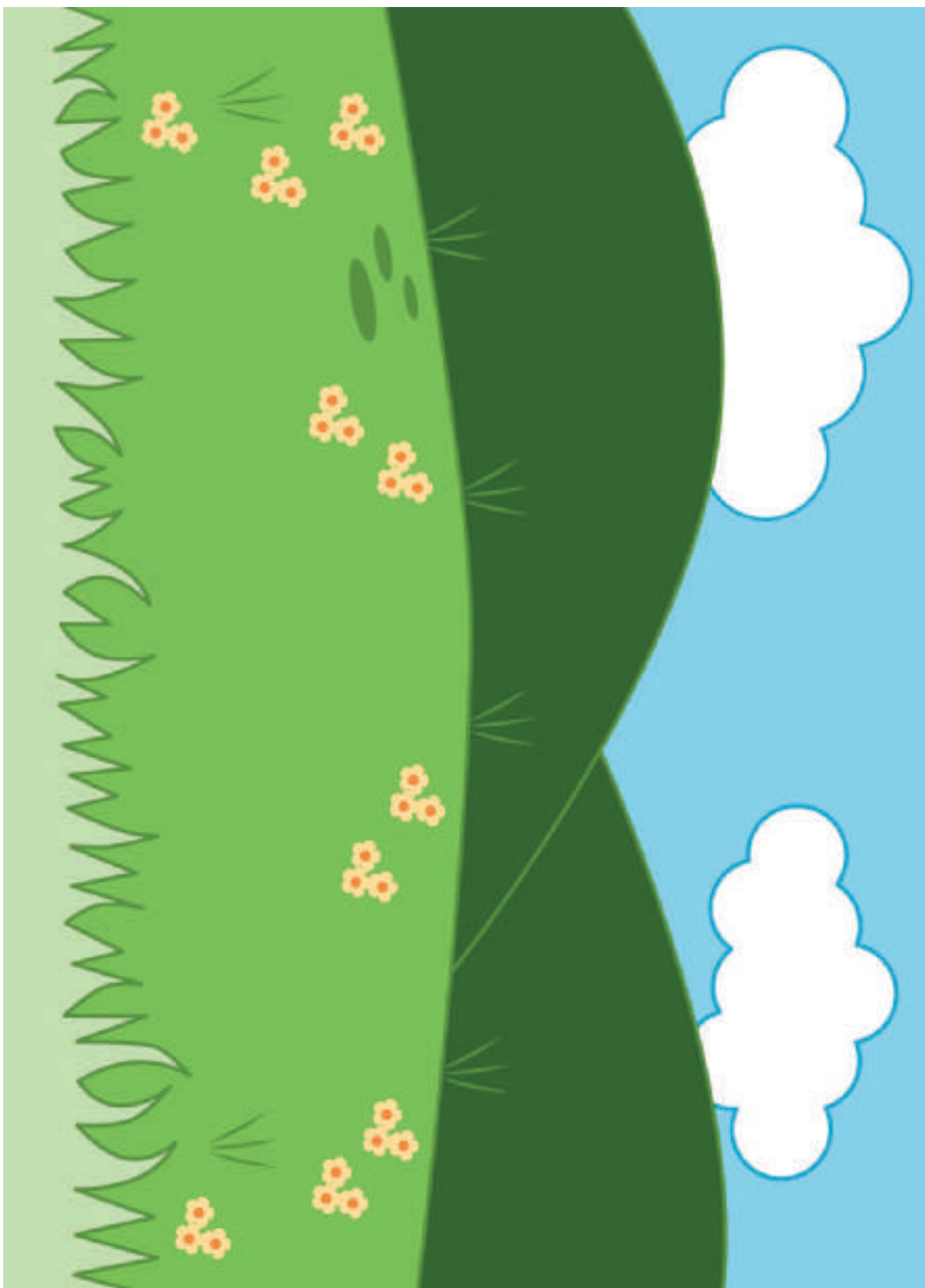
$$8 - 4$$



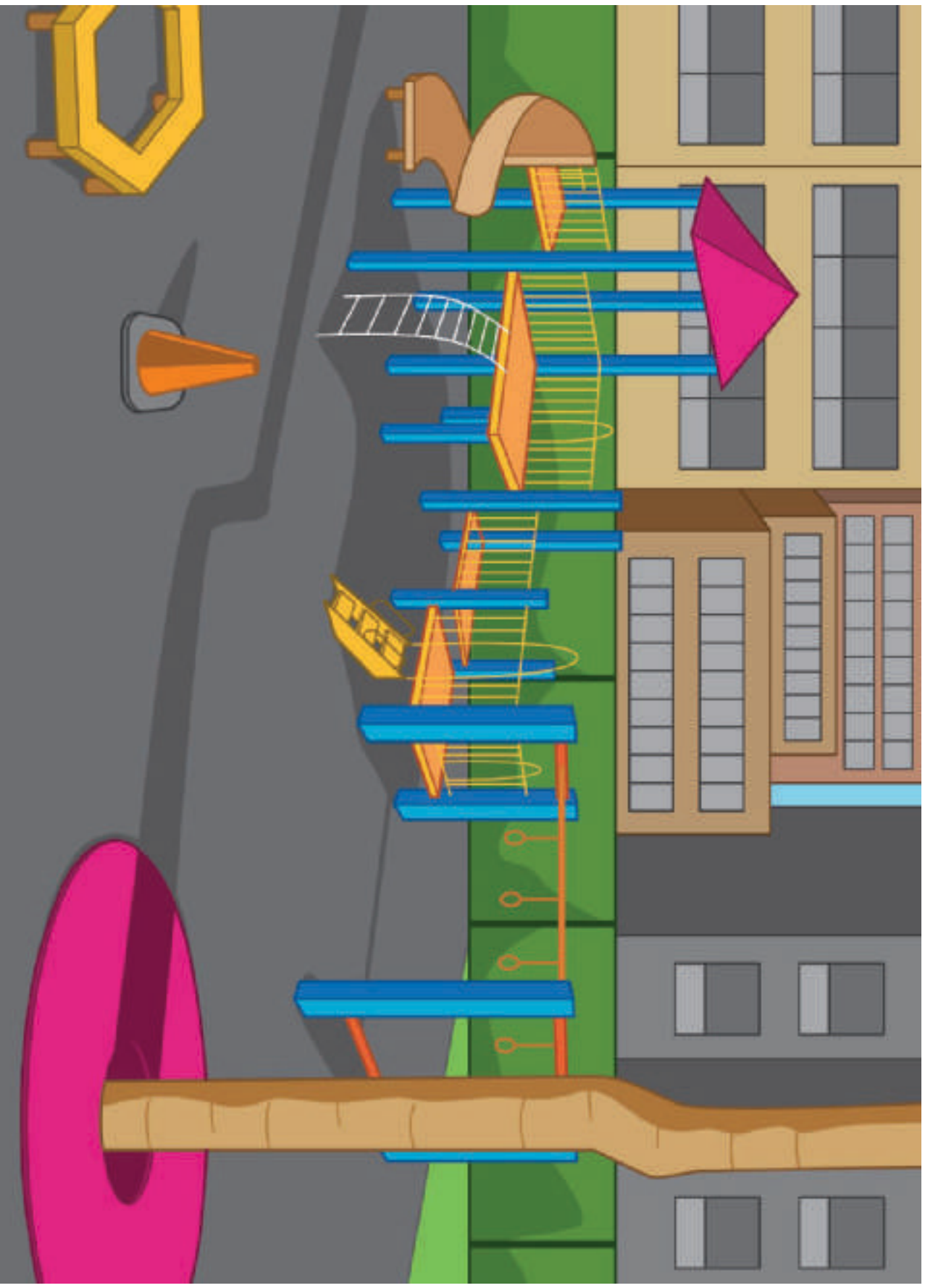
Picture A



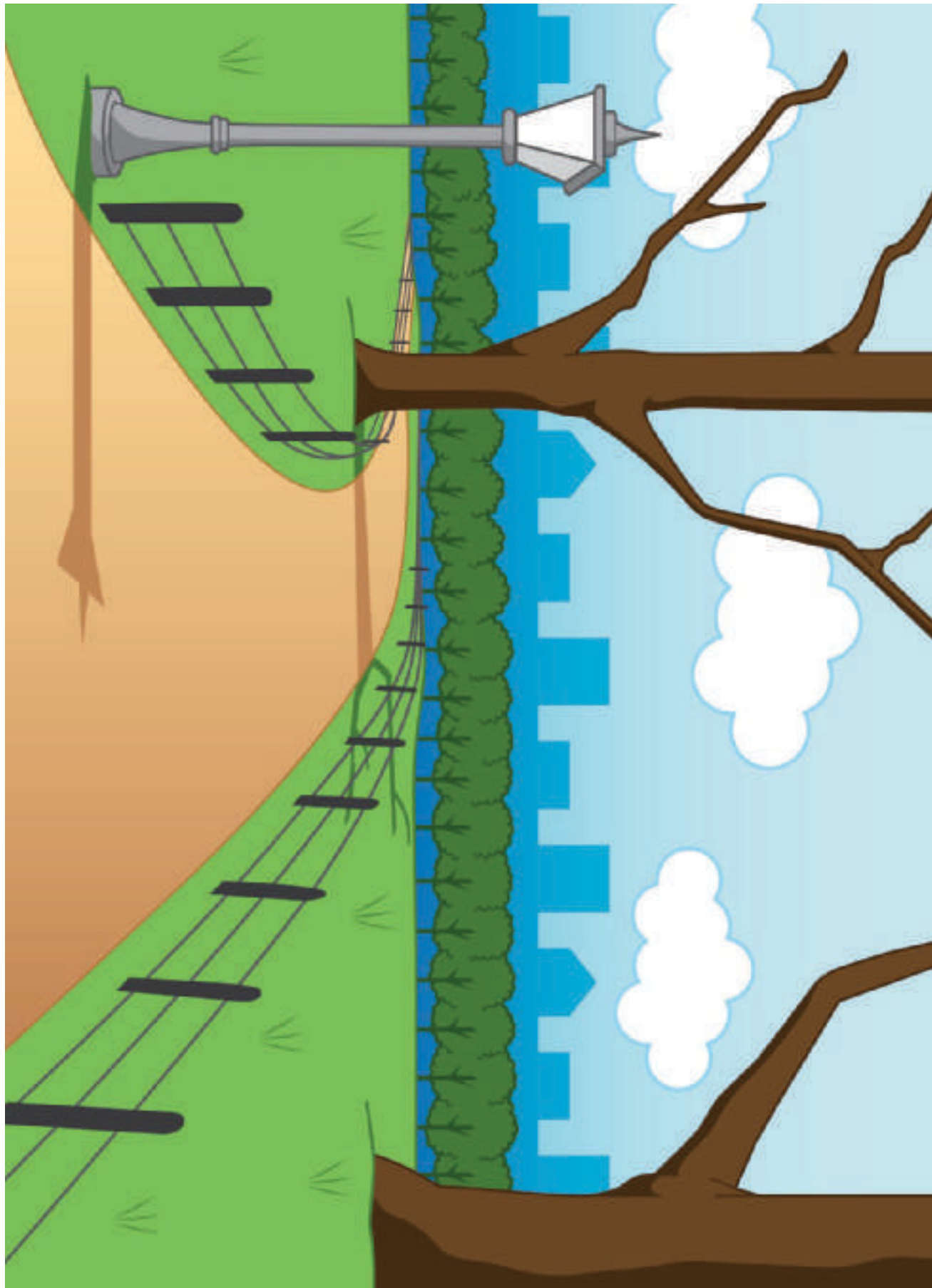
Picture B



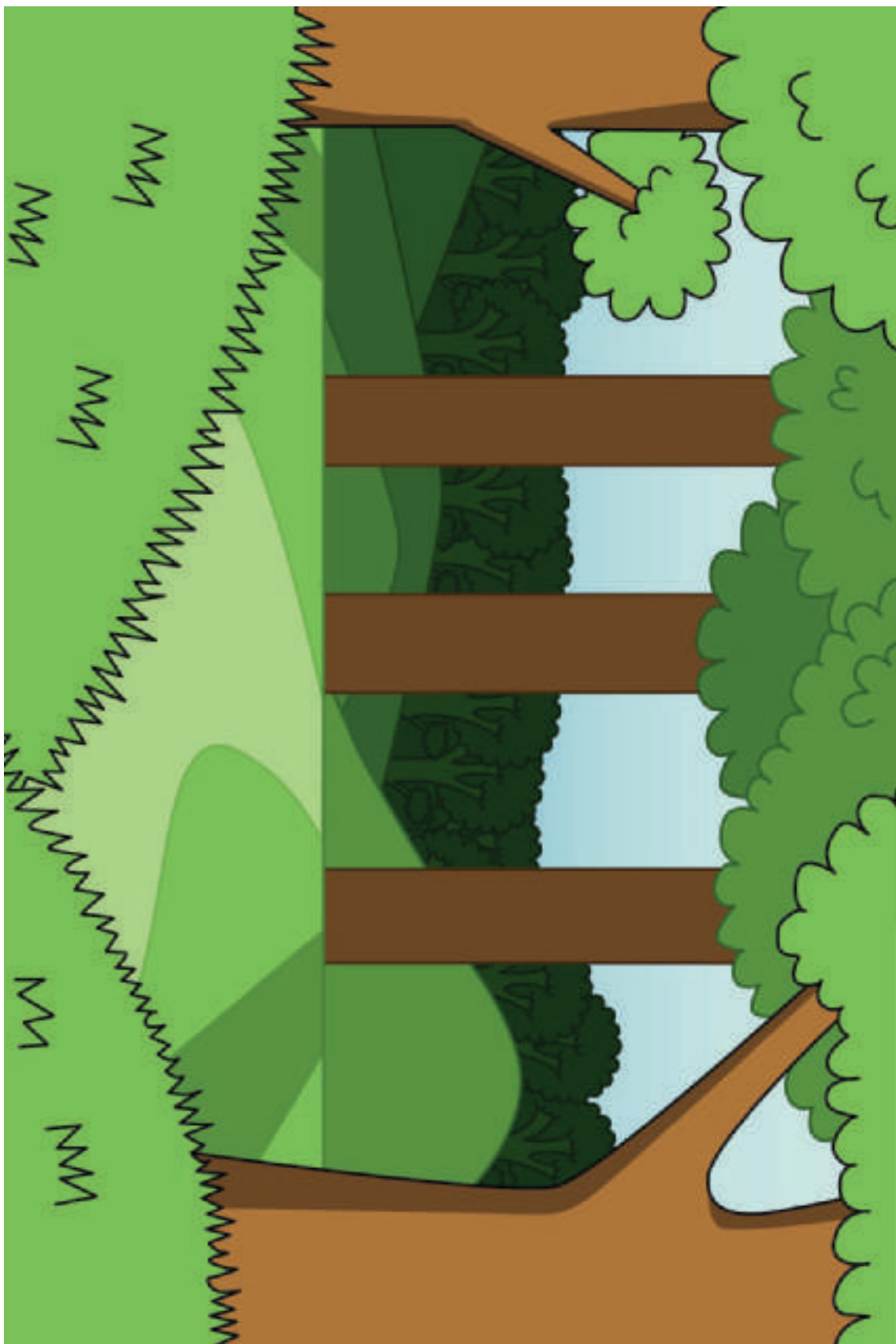
Picture C



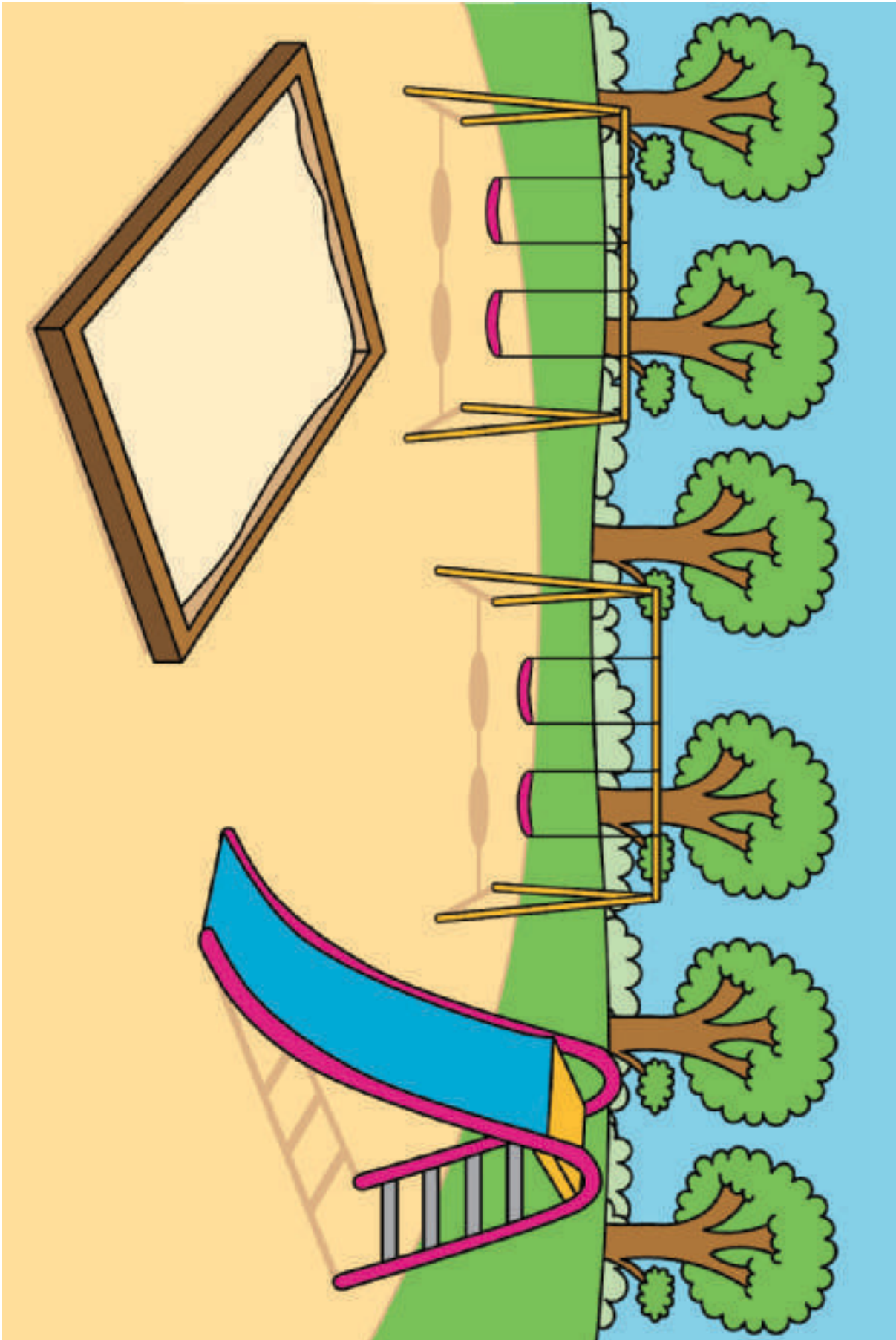
Picture D



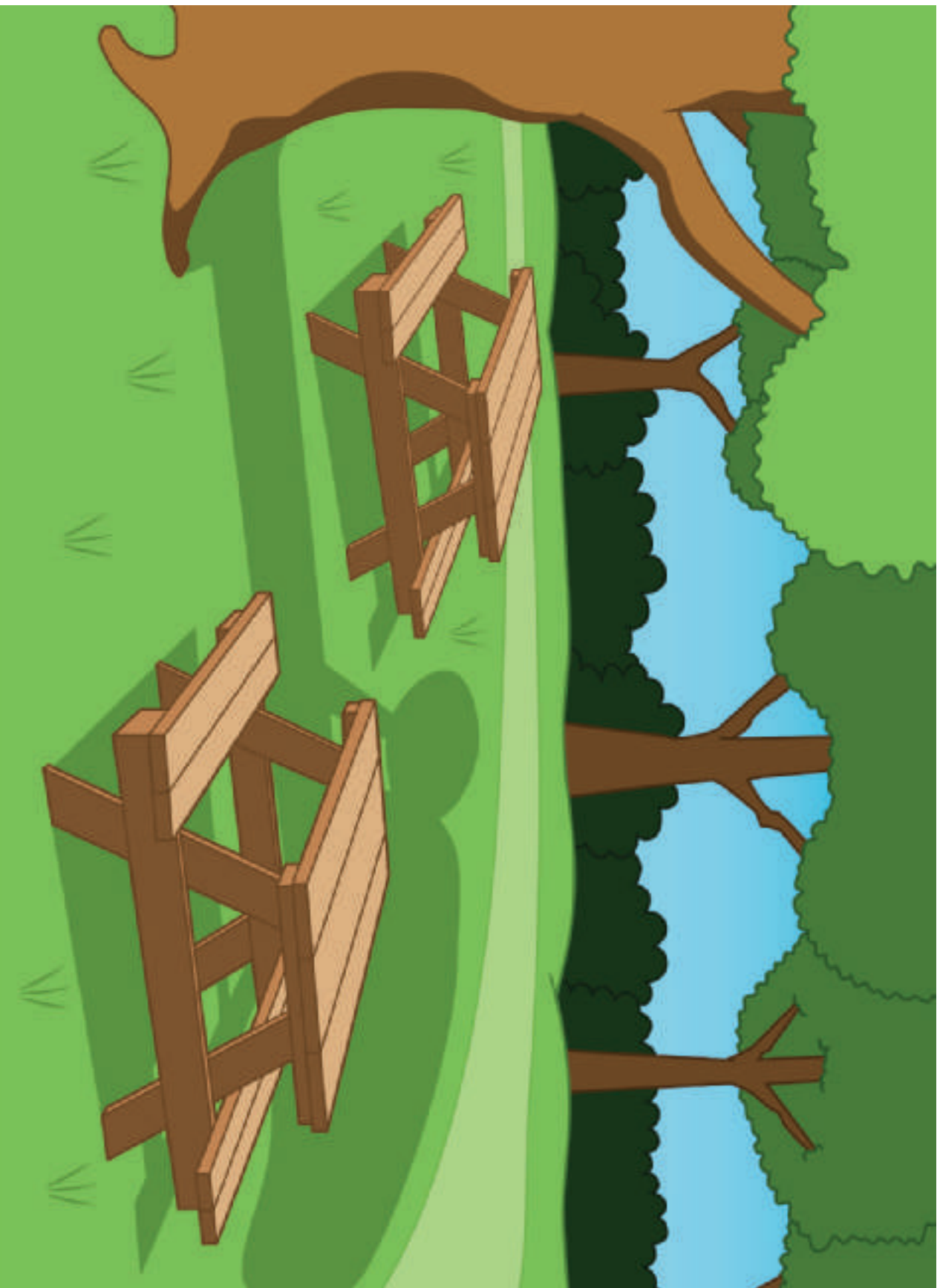
Picture E



Picture F



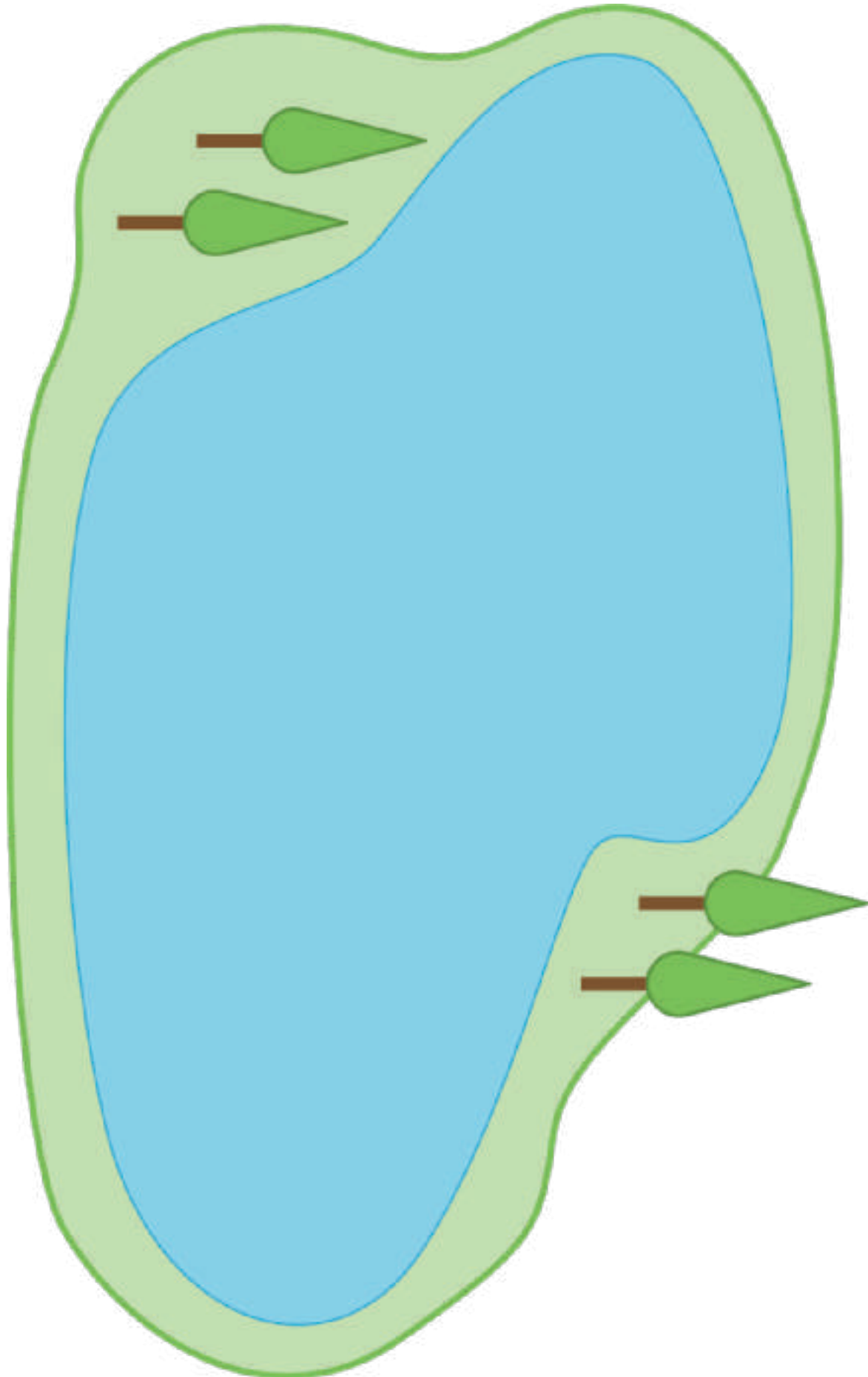
Picture G



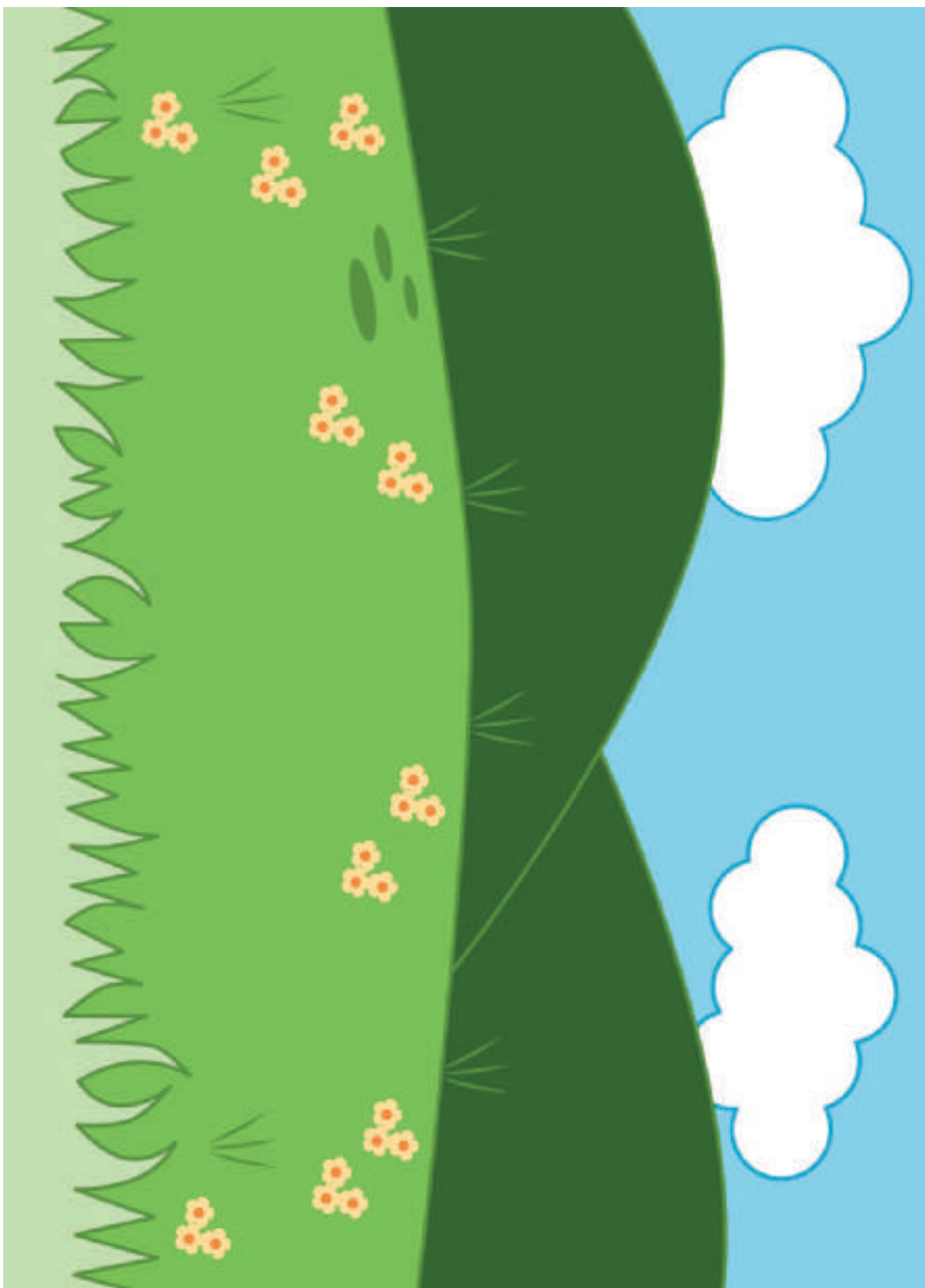
Picture H



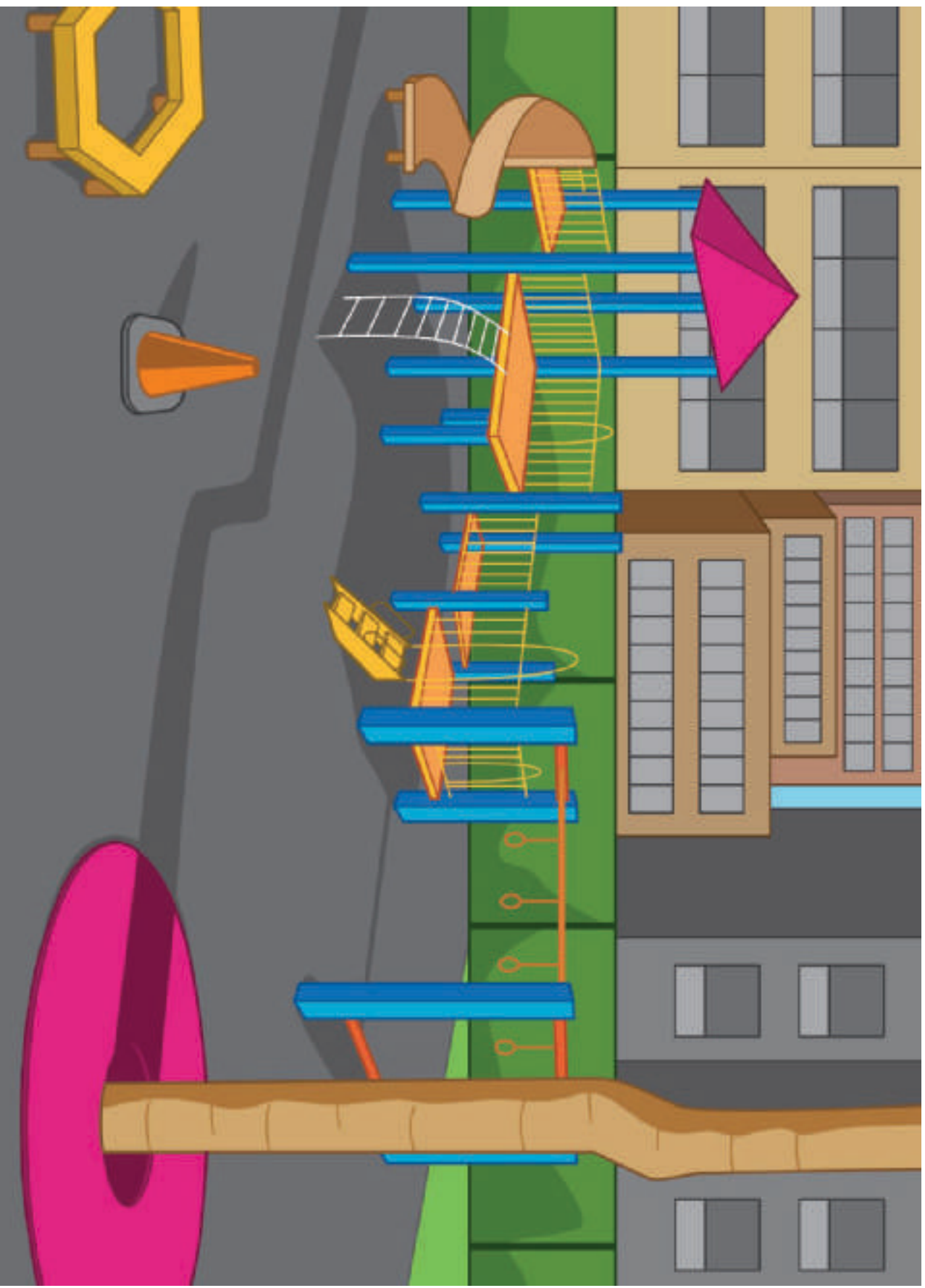
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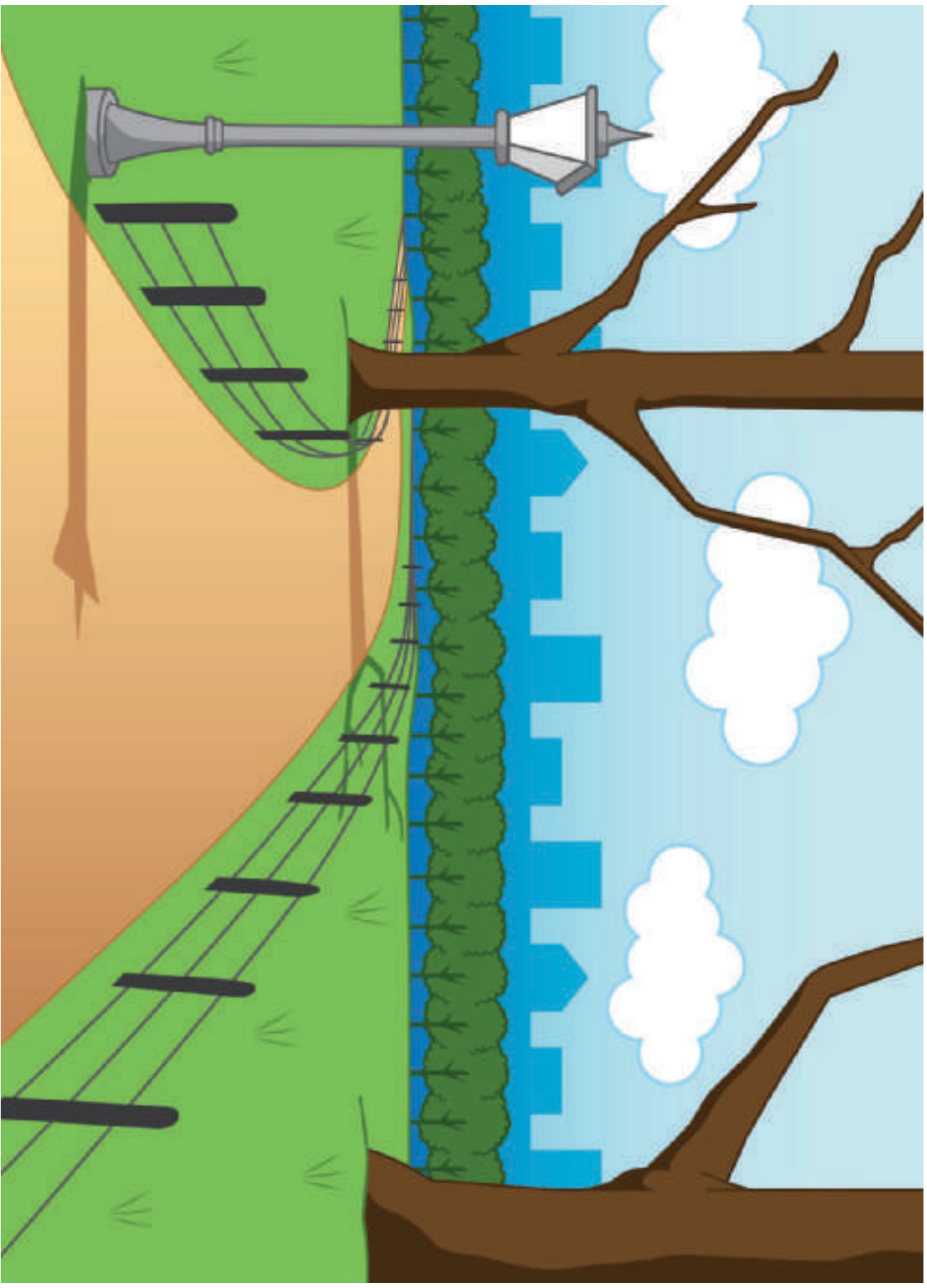
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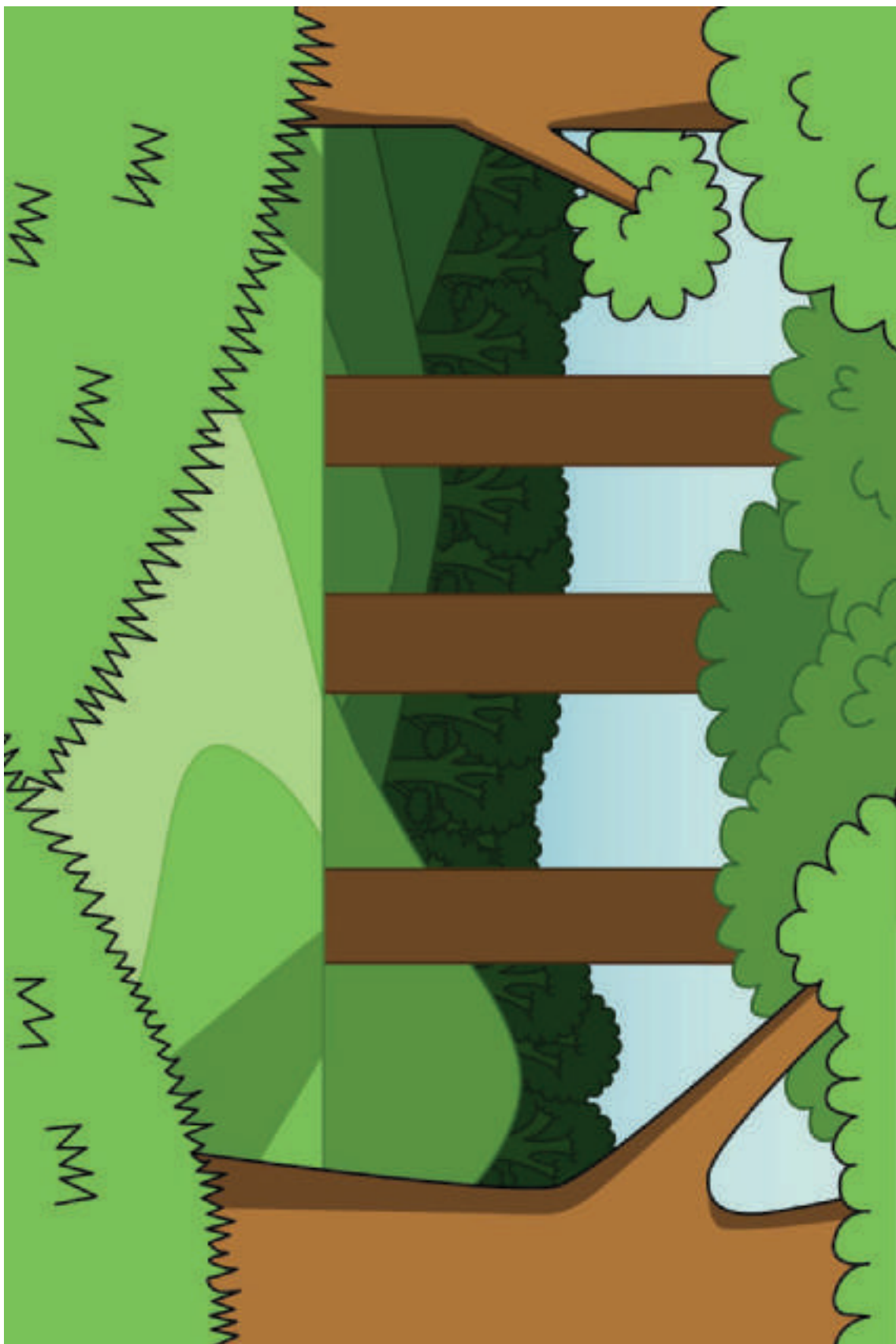
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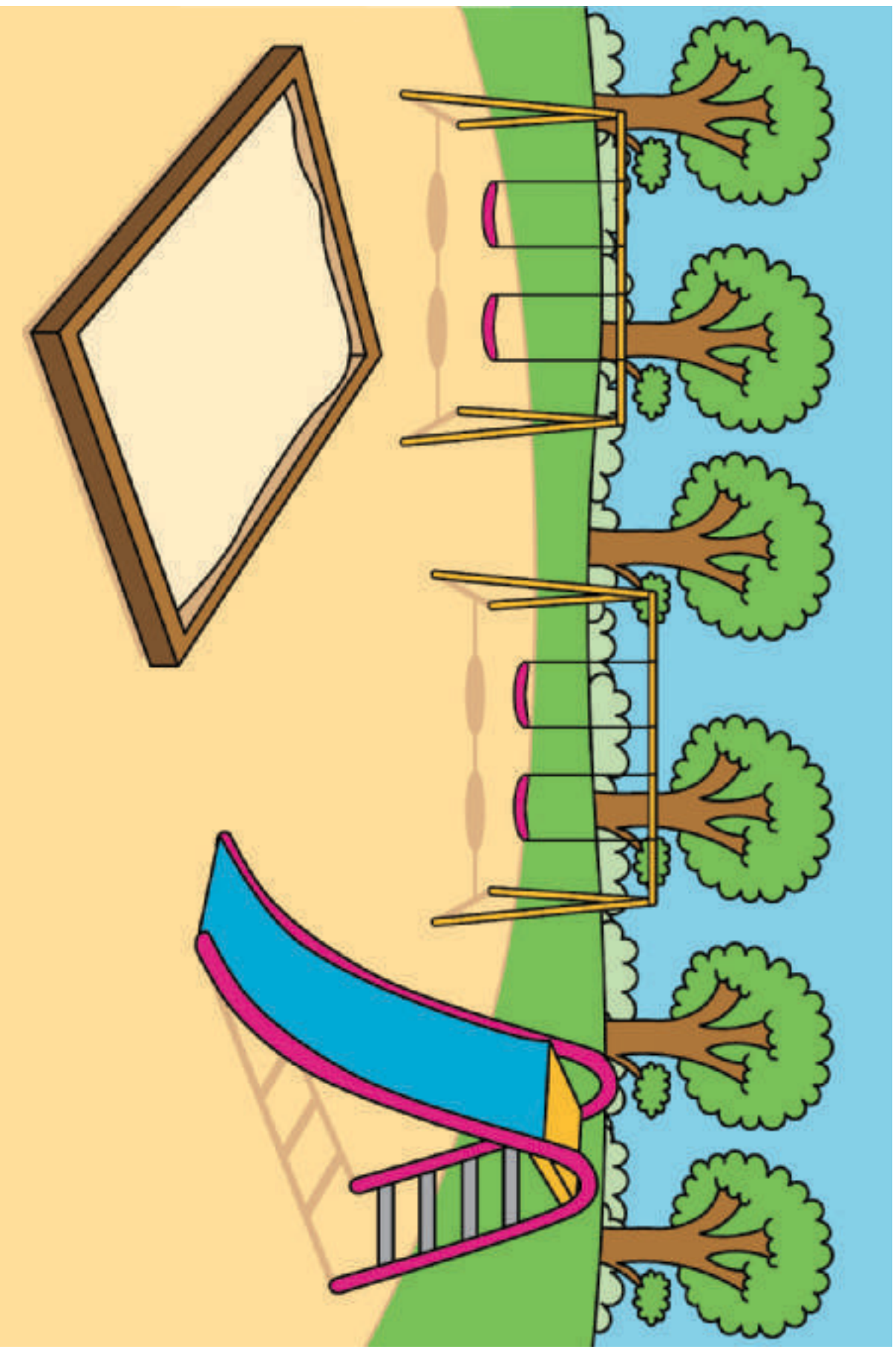
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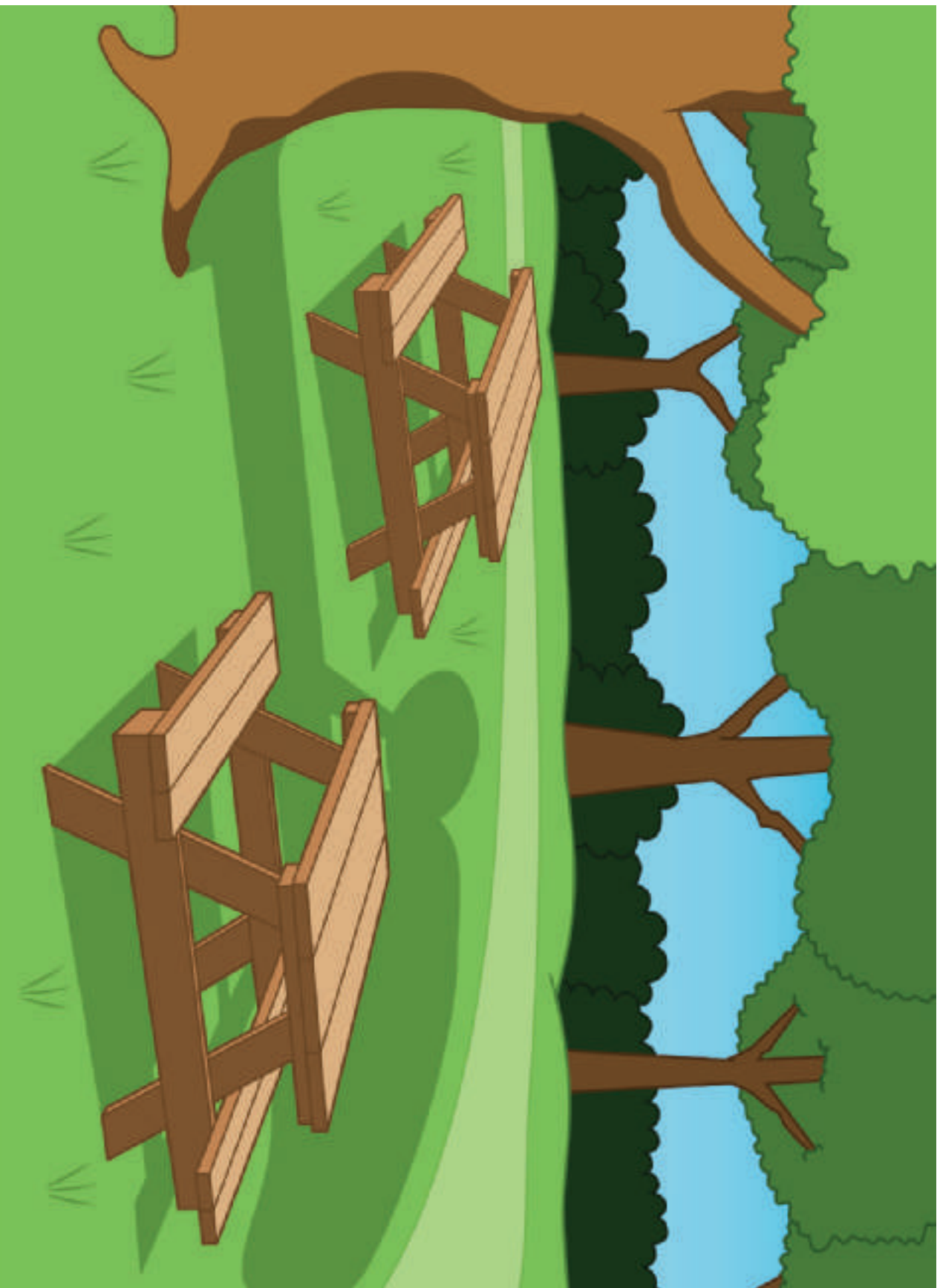
Picture E



Picture F



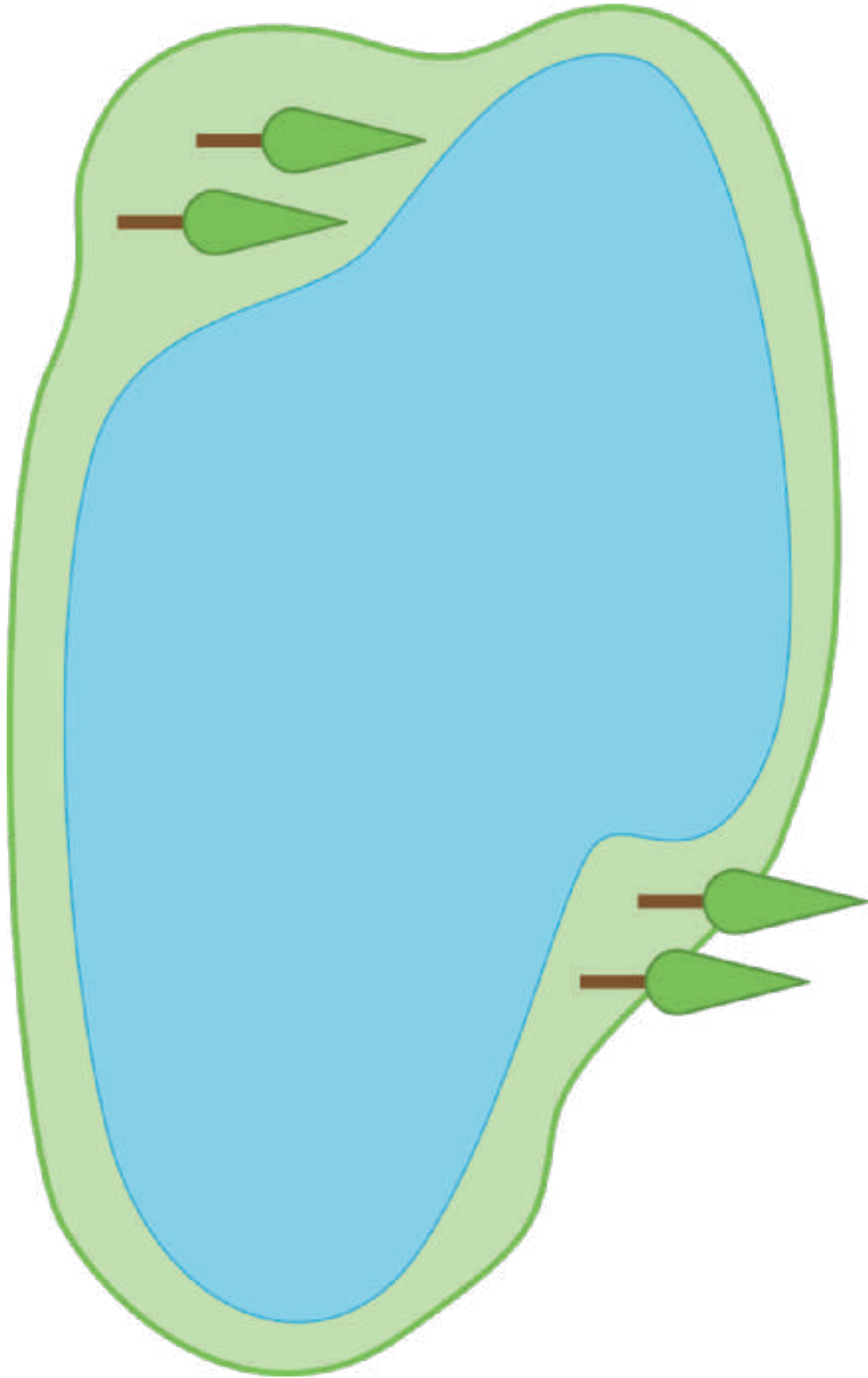
Picture G



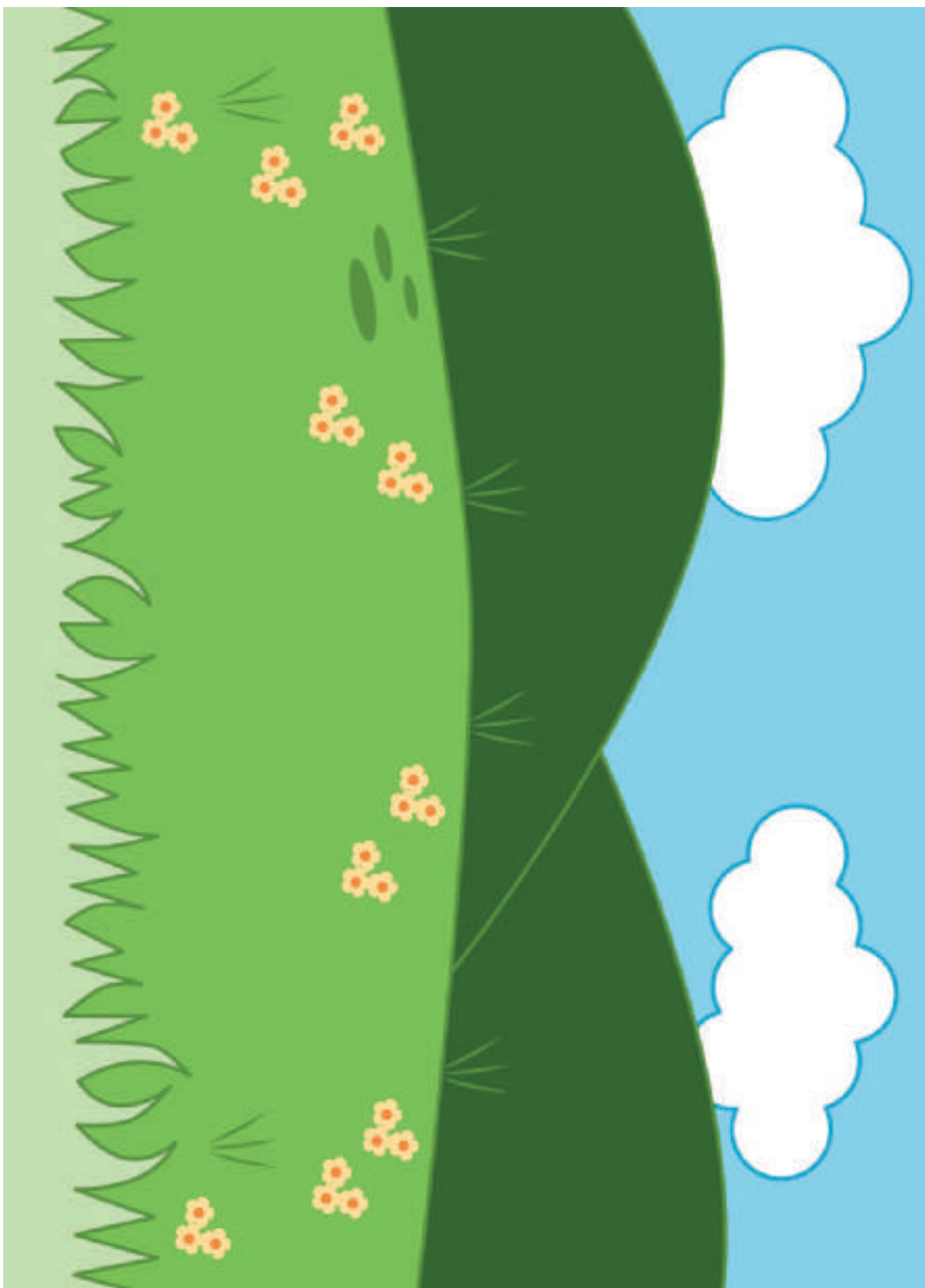
Picture H



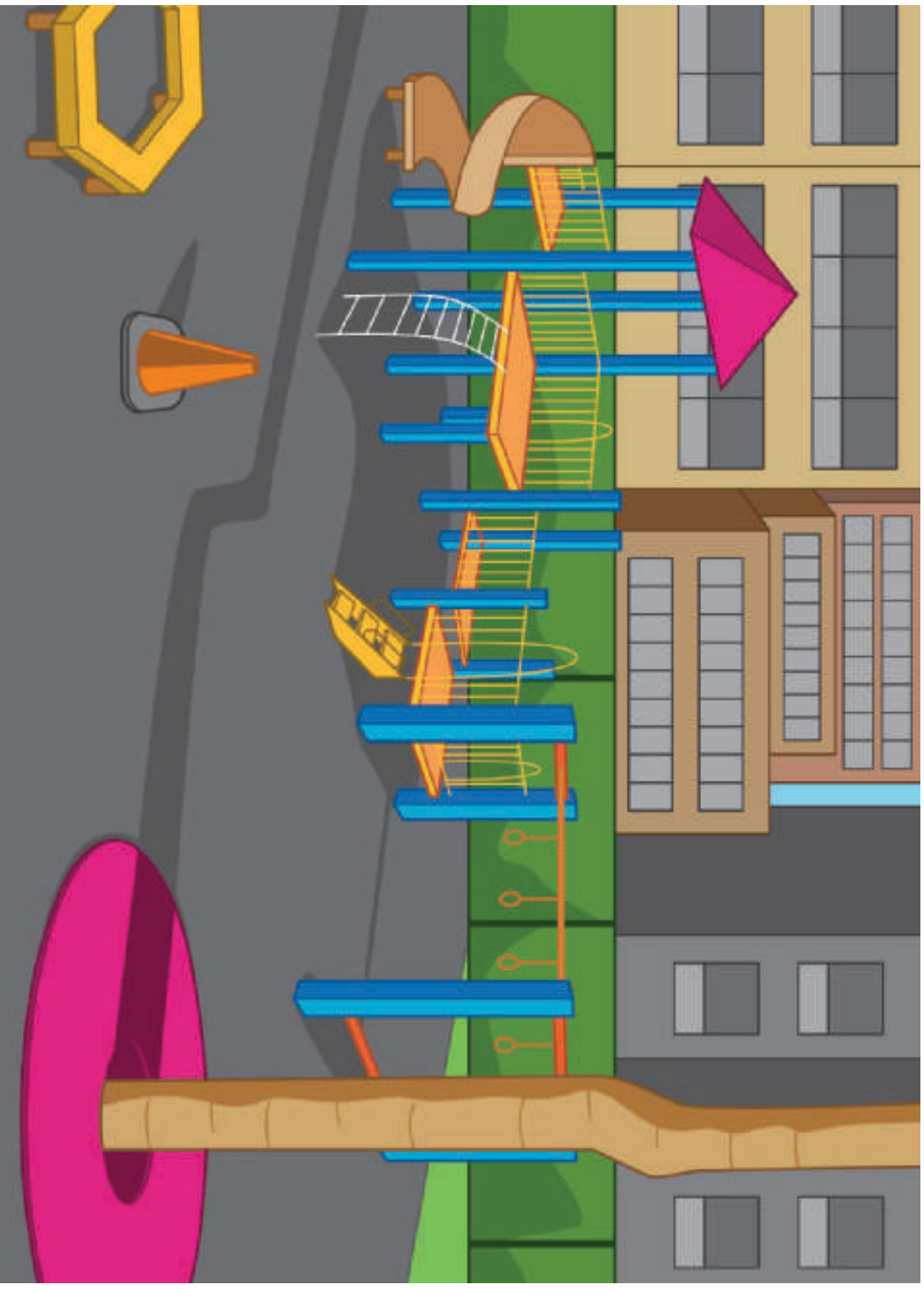
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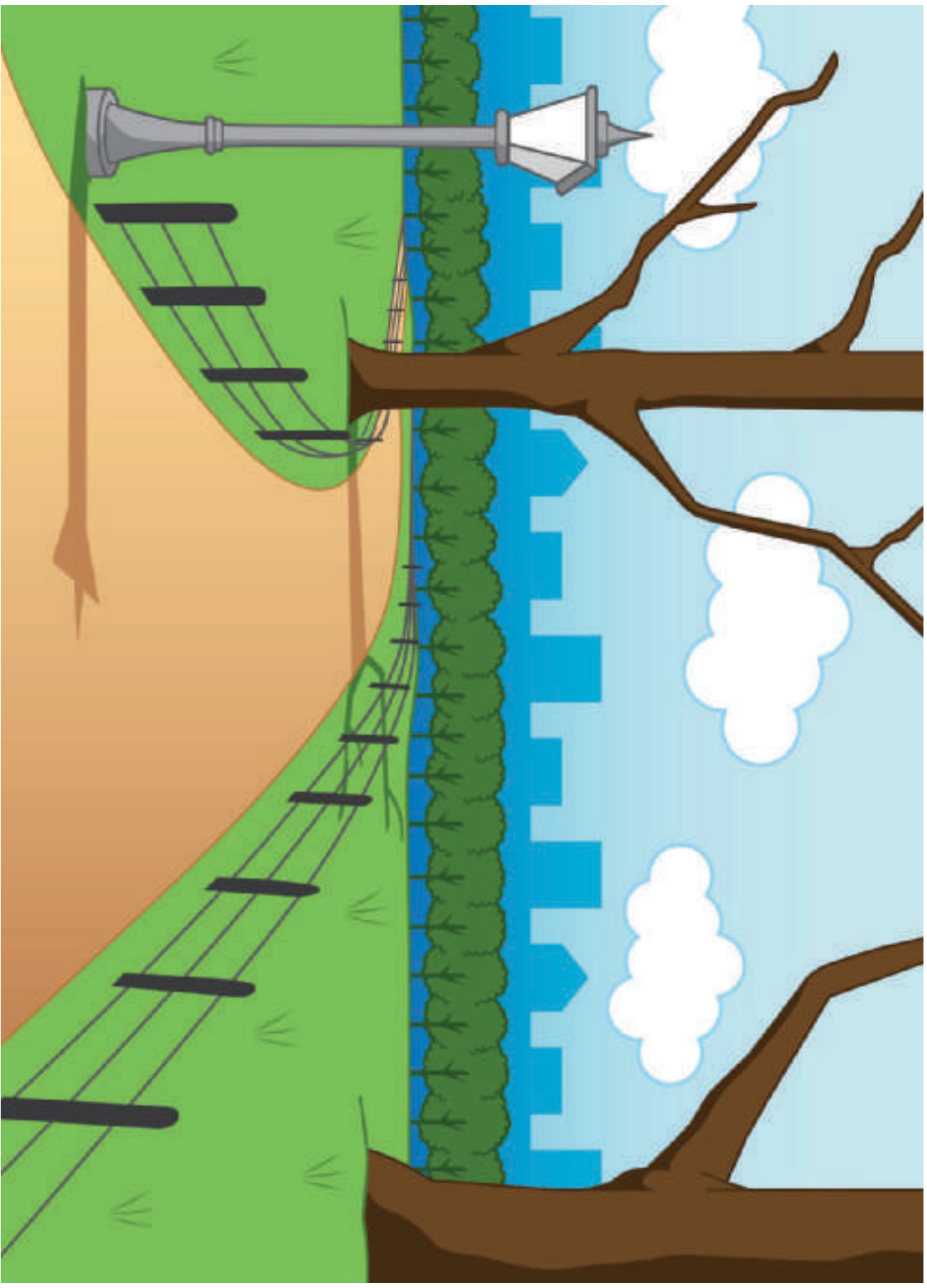
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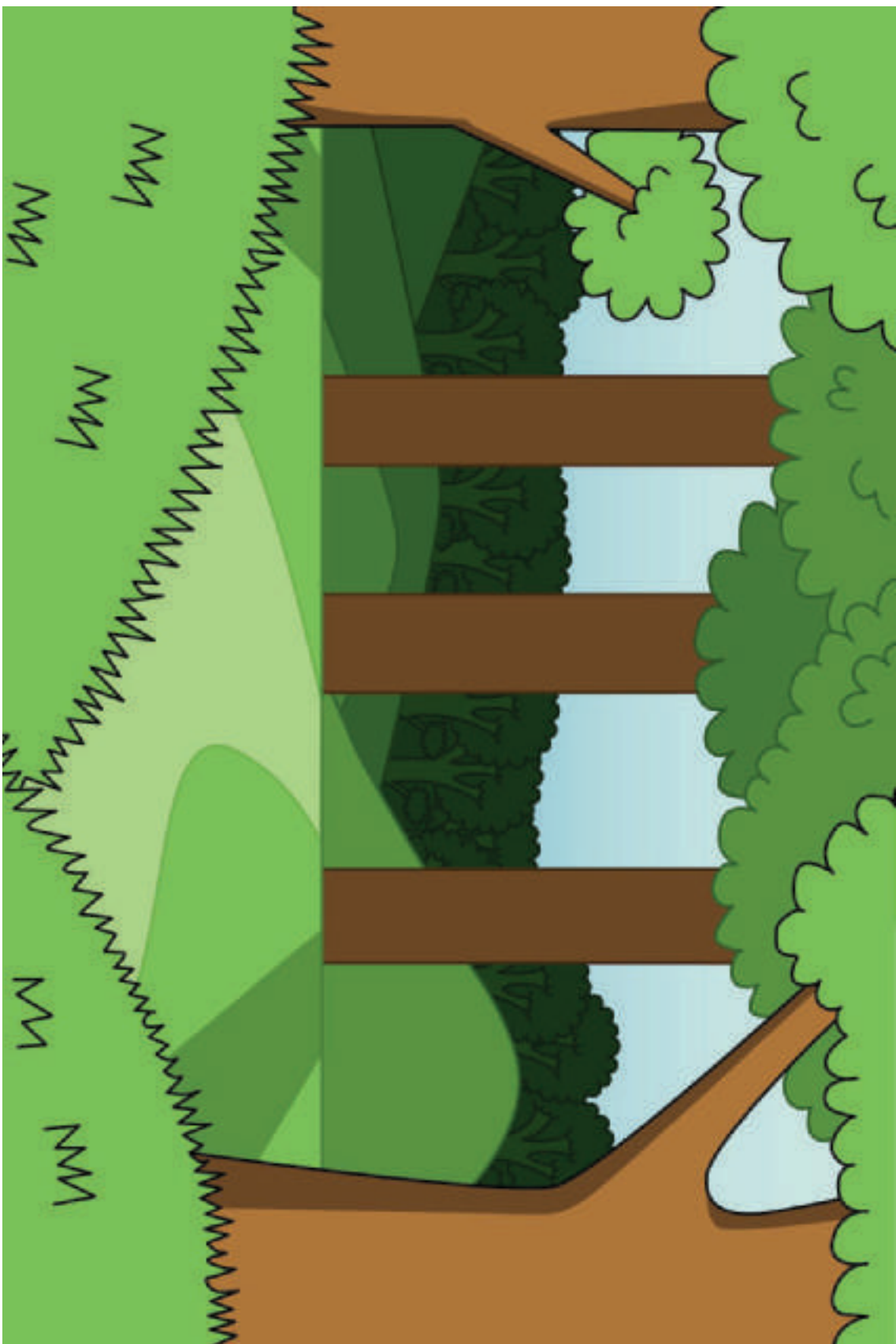
Picture C



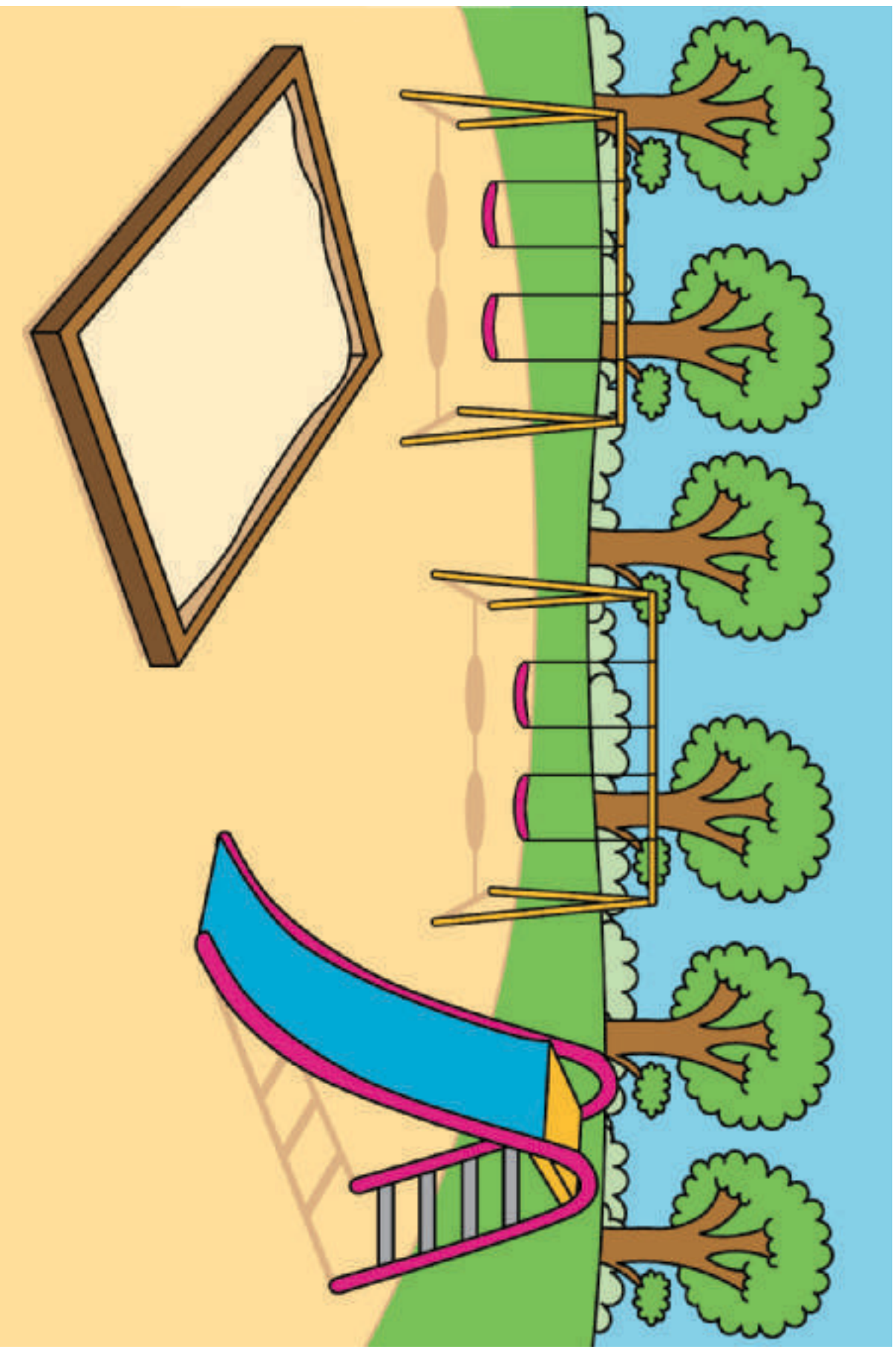
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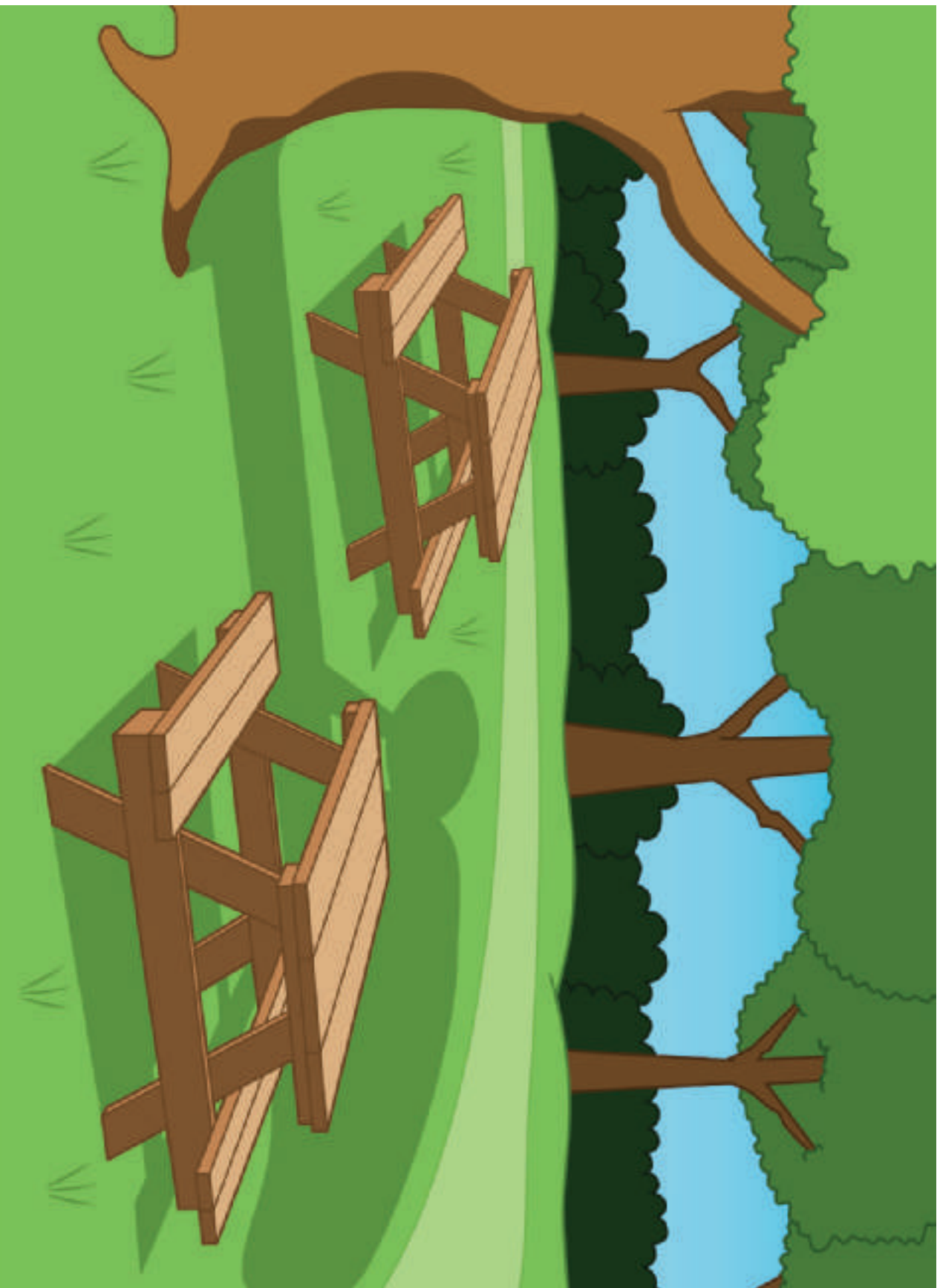
Picture E



Picture F



Picture G



Picture H



Questions About Us Chart 5-Frame Template

Use the 5-frame template to create your chart. Print and cut out enough 5-frames so that there is a square for each student in the class. For example, if there are 23 students in the class, cut out four 5-frames and 3 squares out of a fifth 5-frame. See sample charts below.

[illegible]

Questions About Us Chart 5-Frame Template

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Use the 5-frame template to create your chart. Print and cut out enough 5-frames so that there is a square for each student in the class. For example, if there are 23 students in the class, cut out four 5-frames and 3 squares out of a fifth 5-frame. See sample charts below.

Questions About Us Chart 5-Frame Template

Questions About Us Chart 5-Frame Template

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Questions About Us Chart 5-Frame Template

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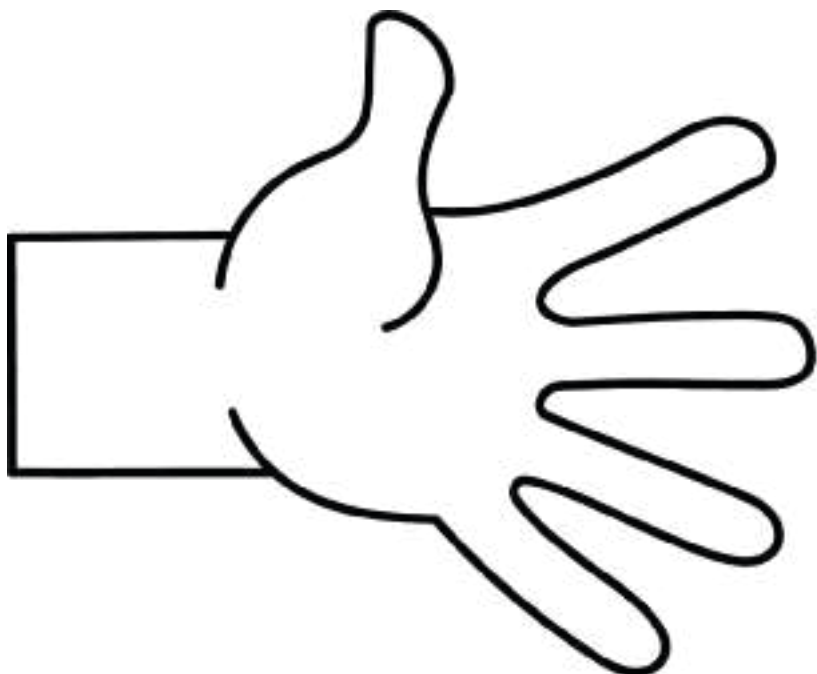
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Questions About Us Chart 5-Frame Template

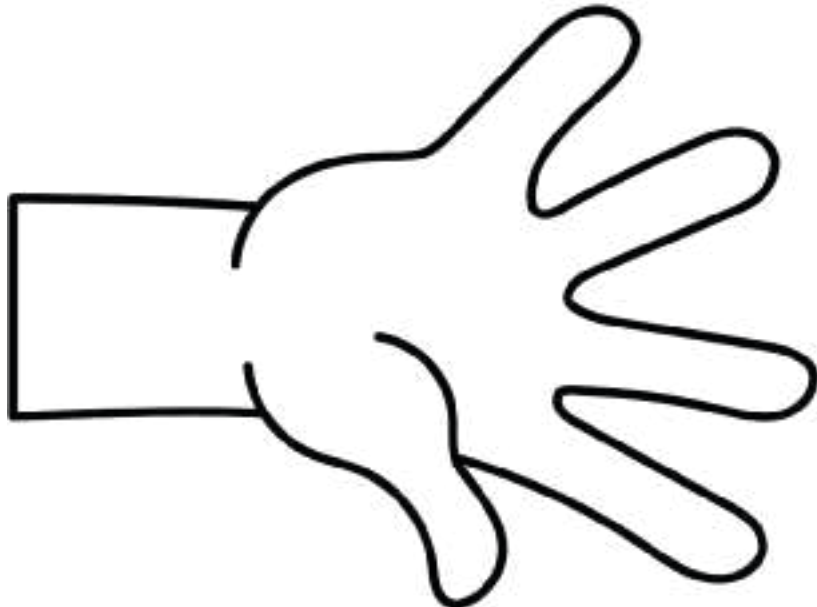
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Questions About Us Chart 5-Frame Template

.....

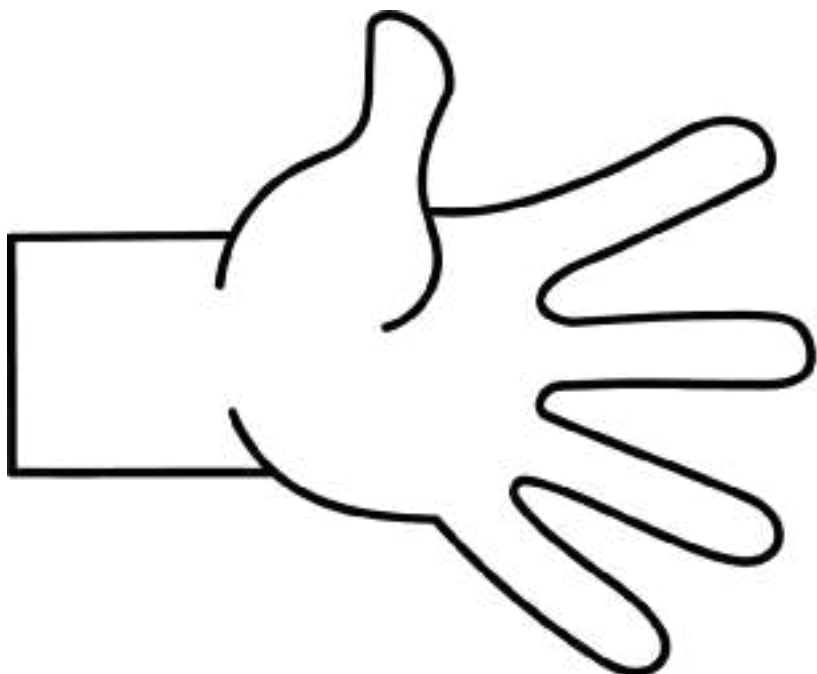


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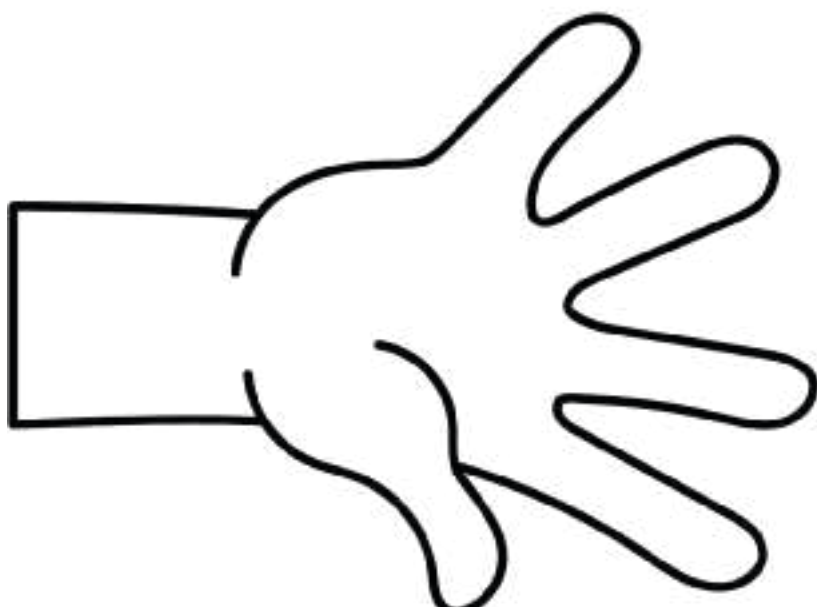


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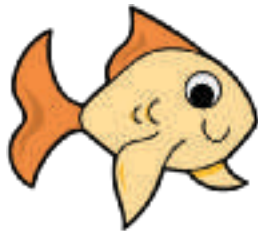
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Roll and Add Stage 2 Recording Sheet

2	7	9	1	8
3	4	10	5	6

2	7	9	1	8
3	4	10	5	6

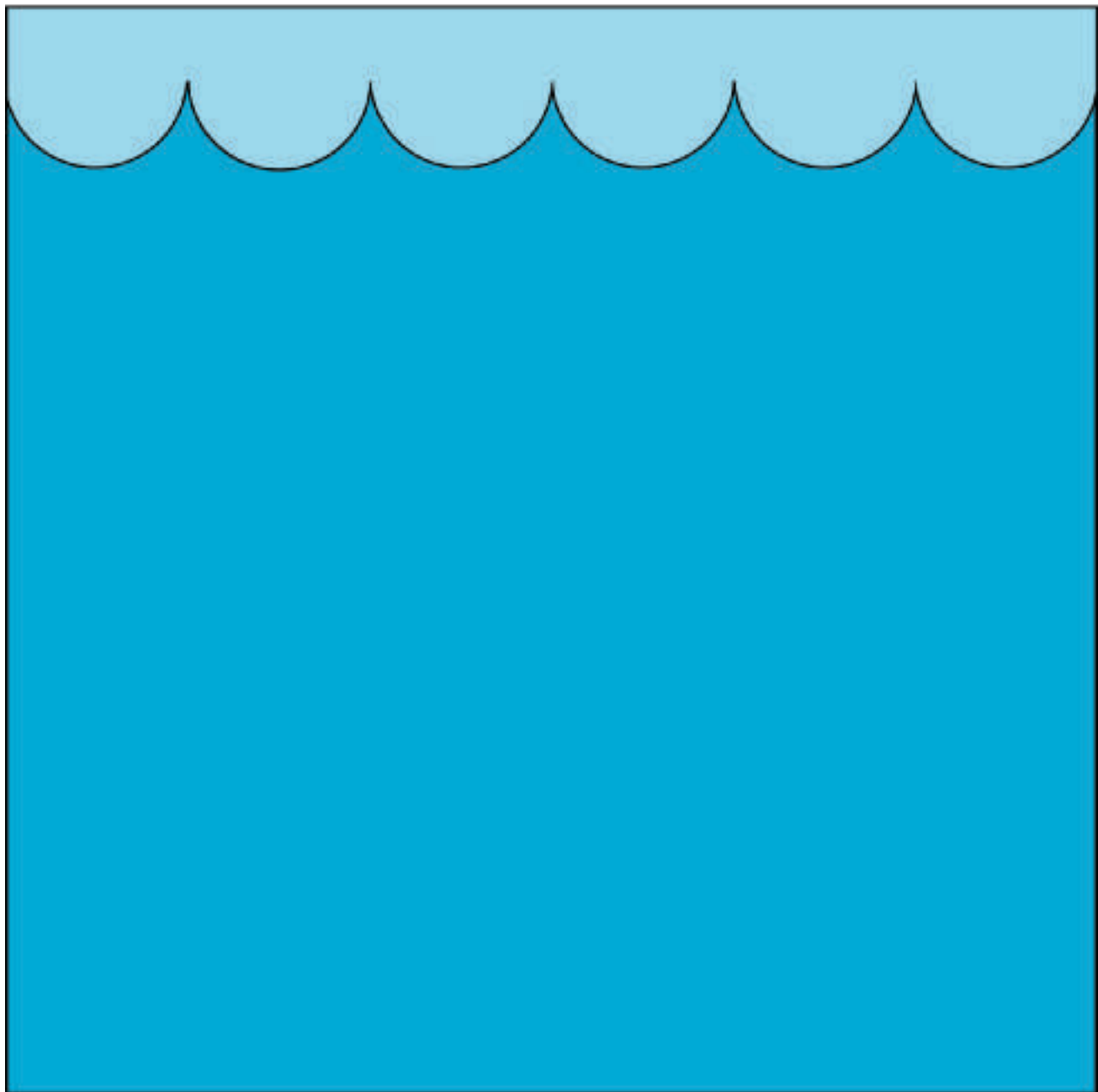
Math Libs Scenes











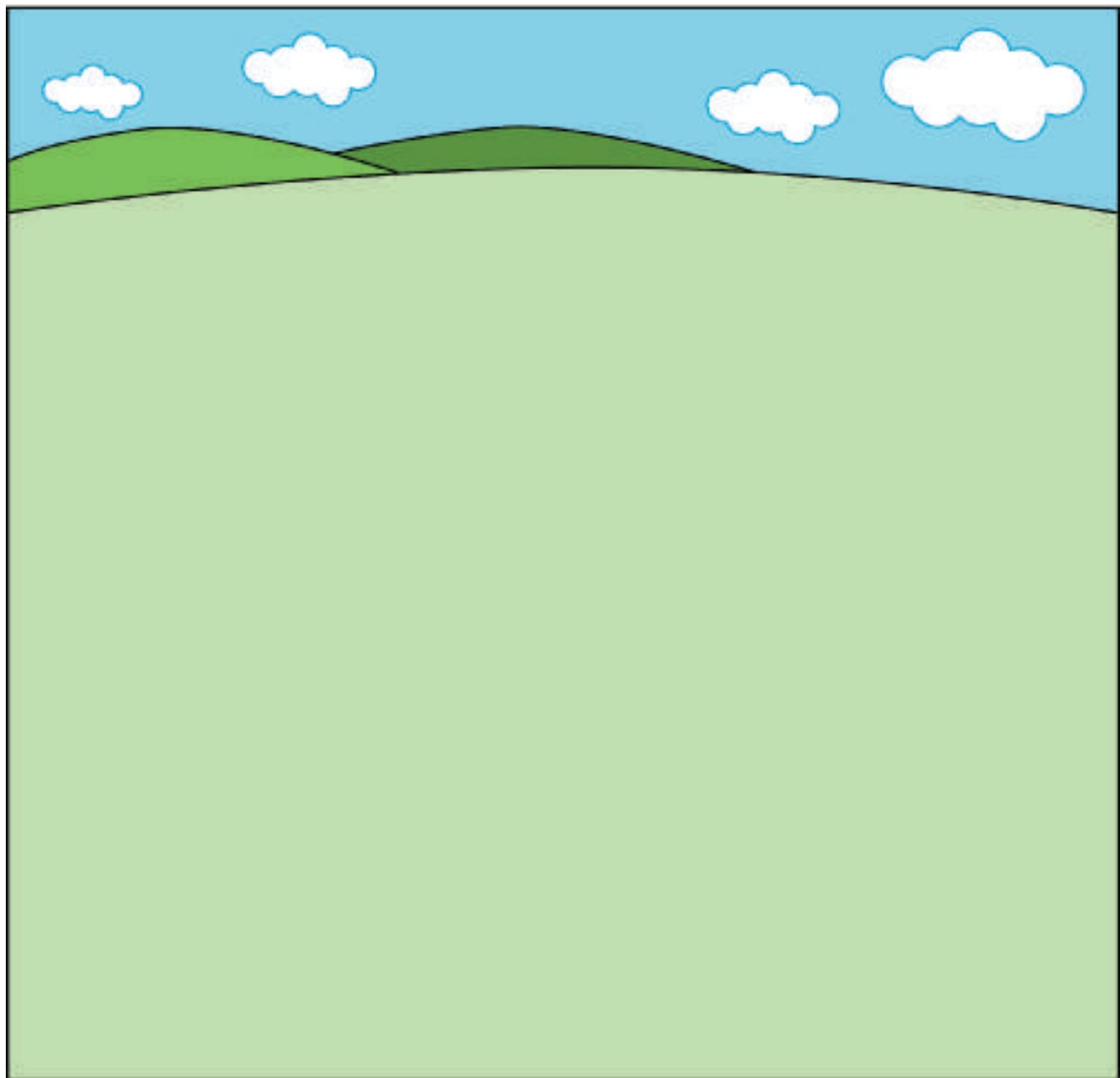
Math Libs Scenes











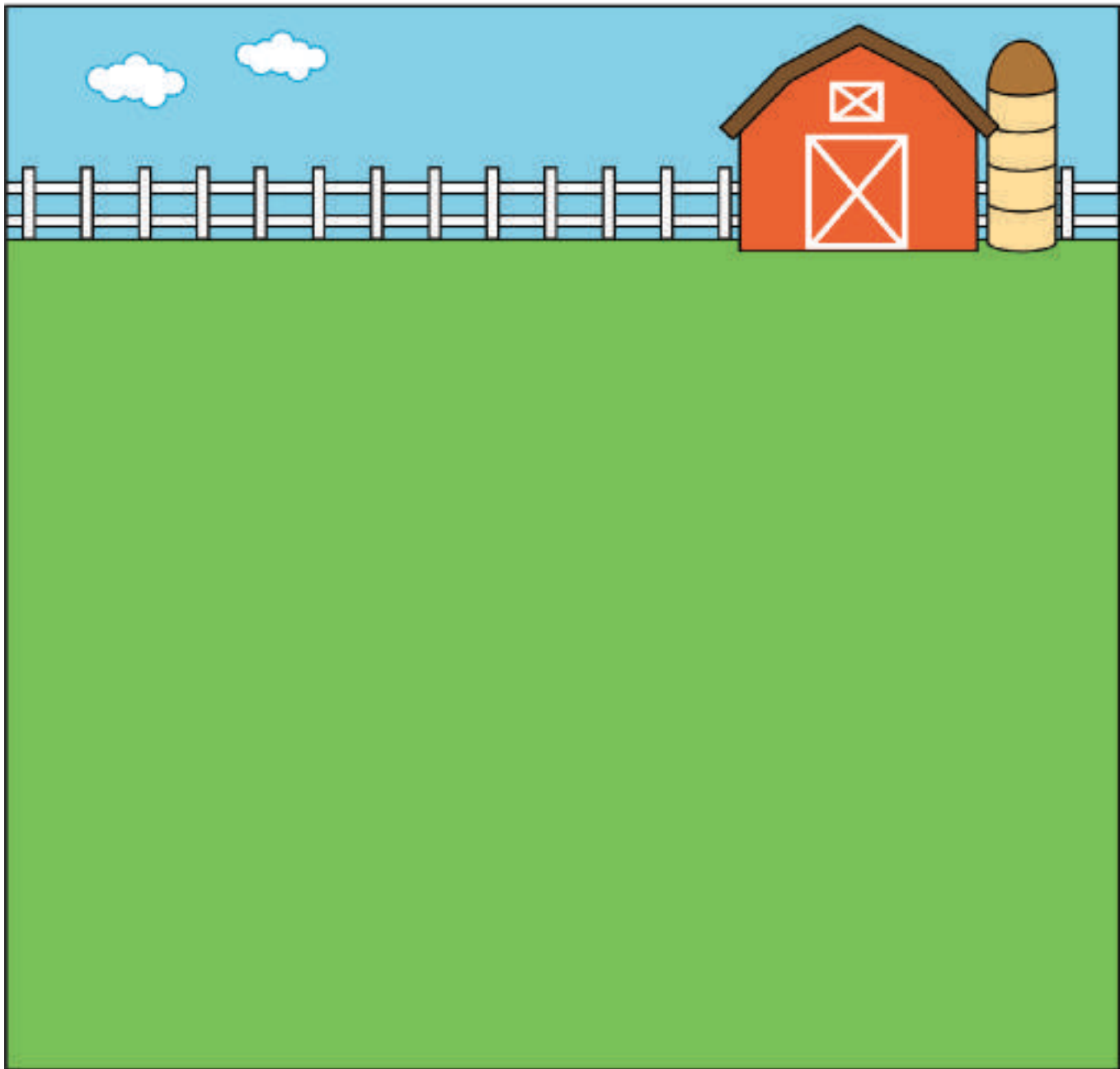
Math Libs Scenes



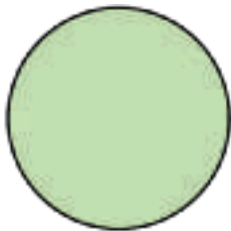




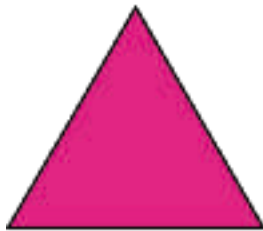




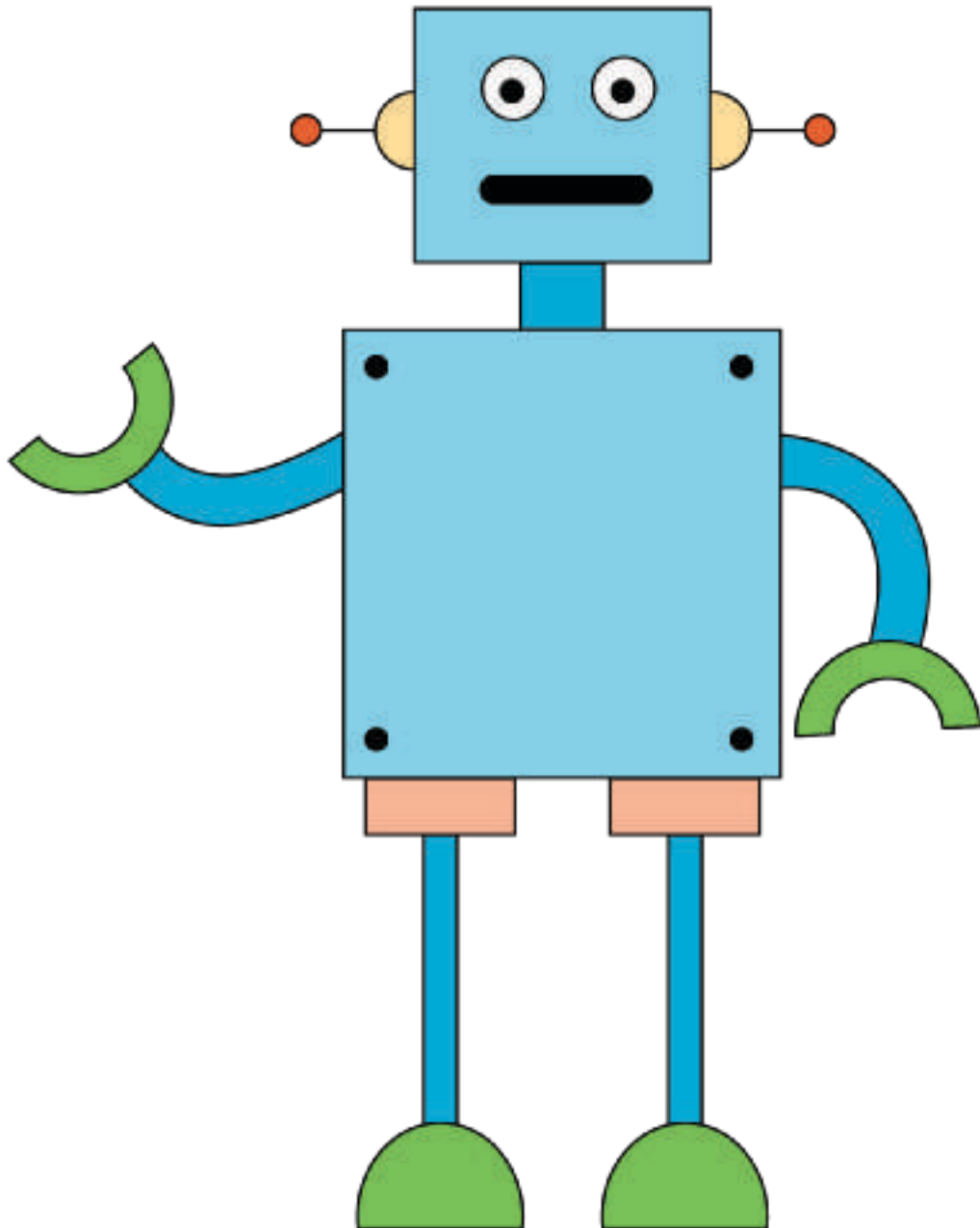
Math Libs Scenes











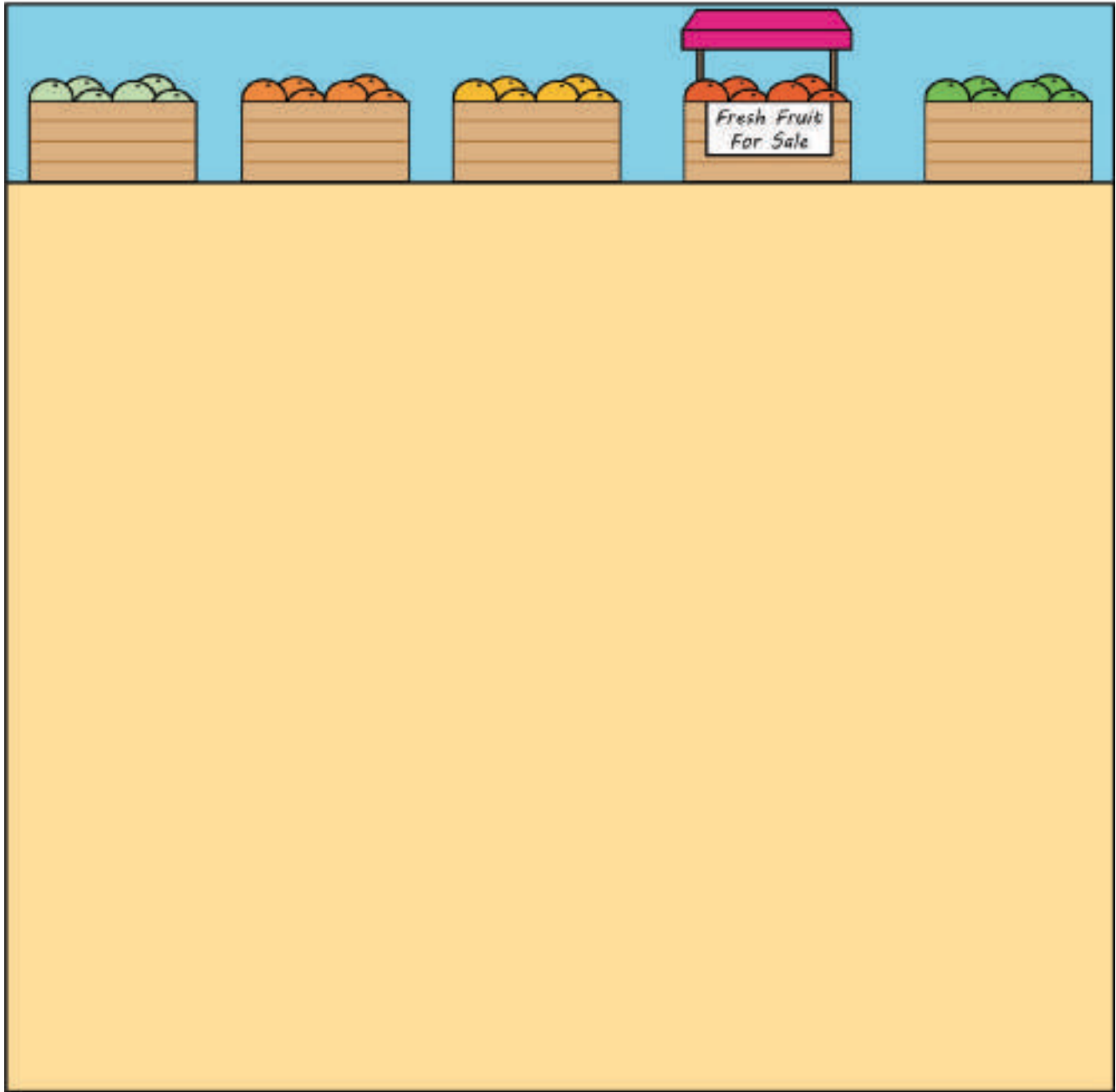
Math Libs Scenes











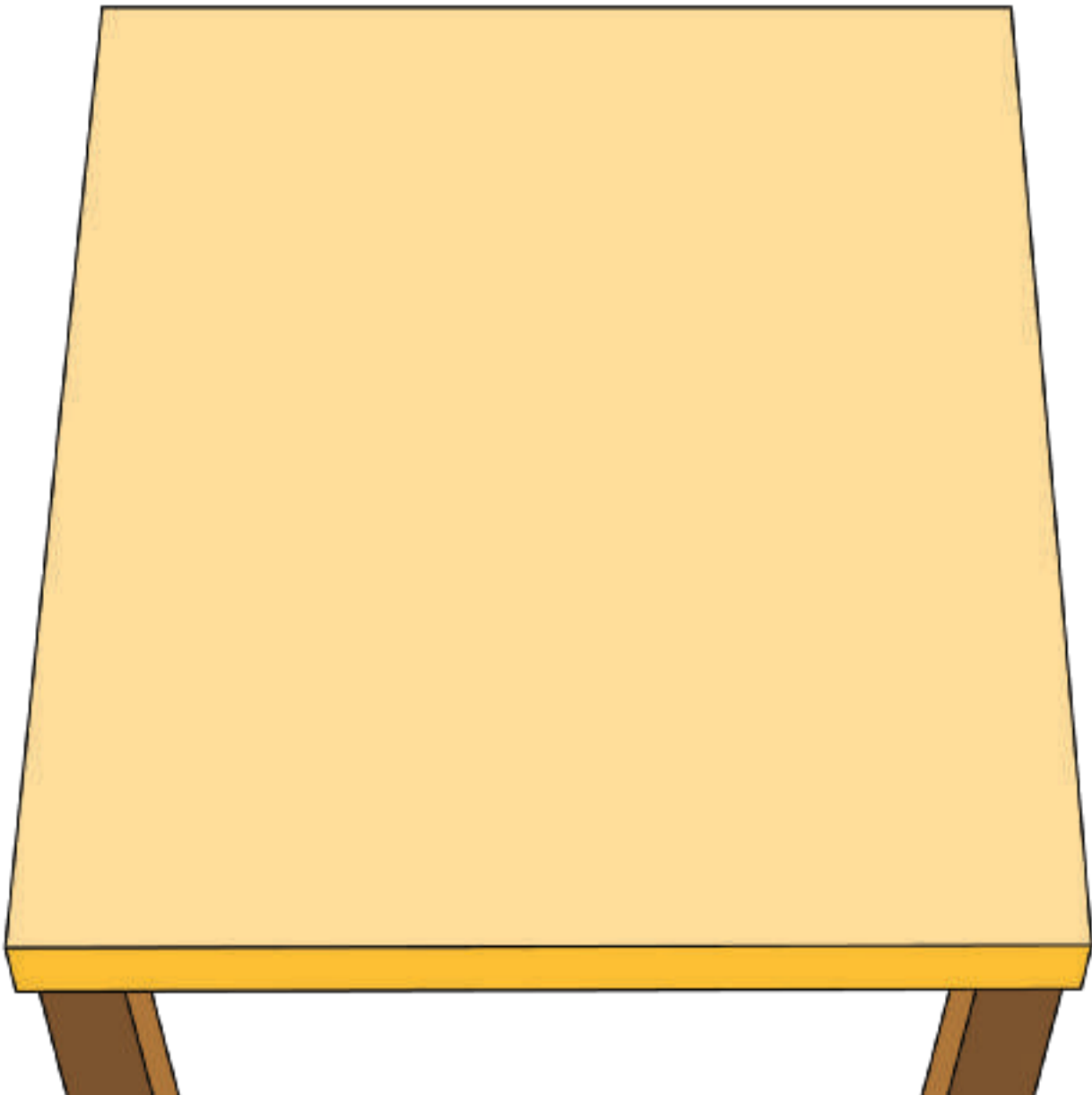
Math Libs Scenes











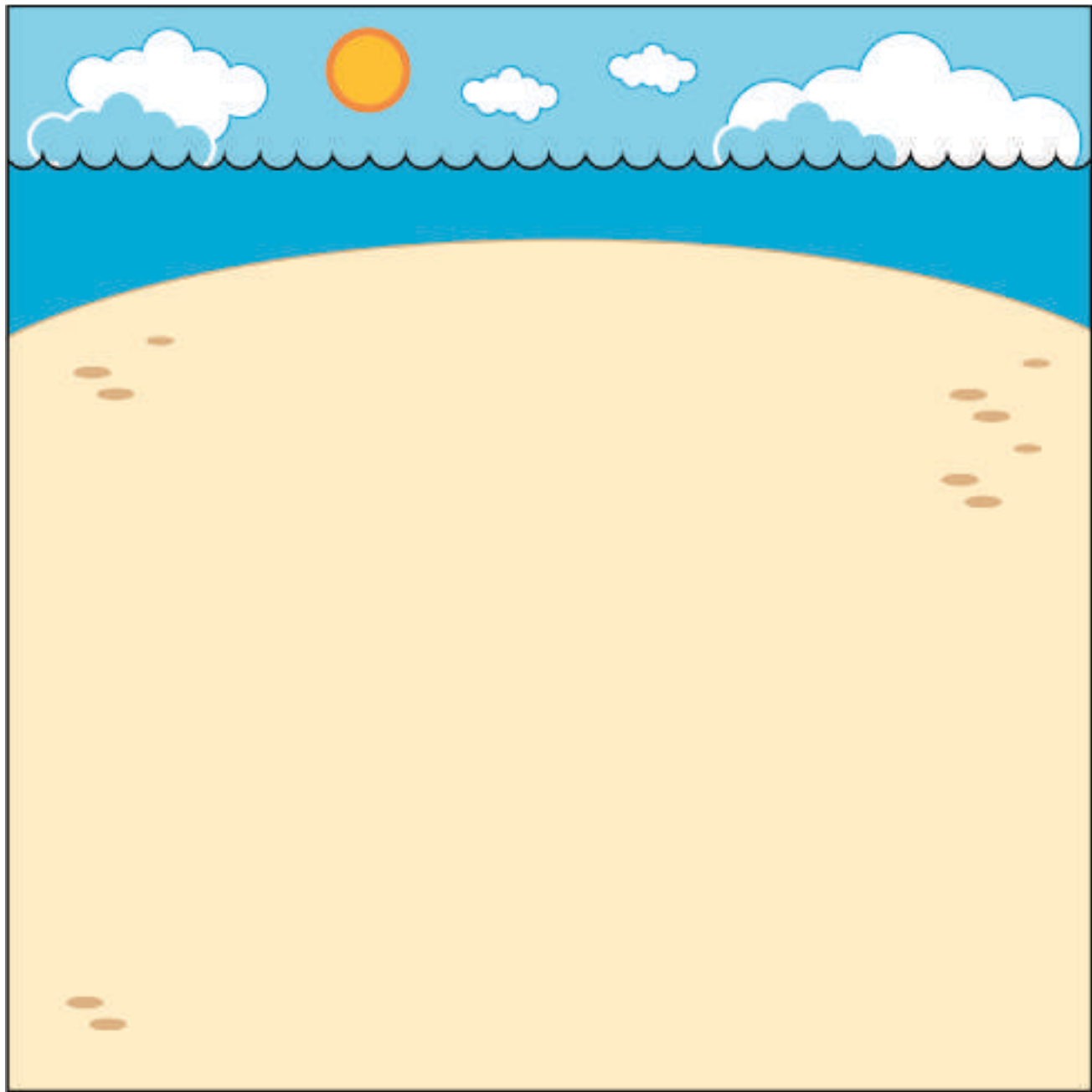
Math Libs Scenes











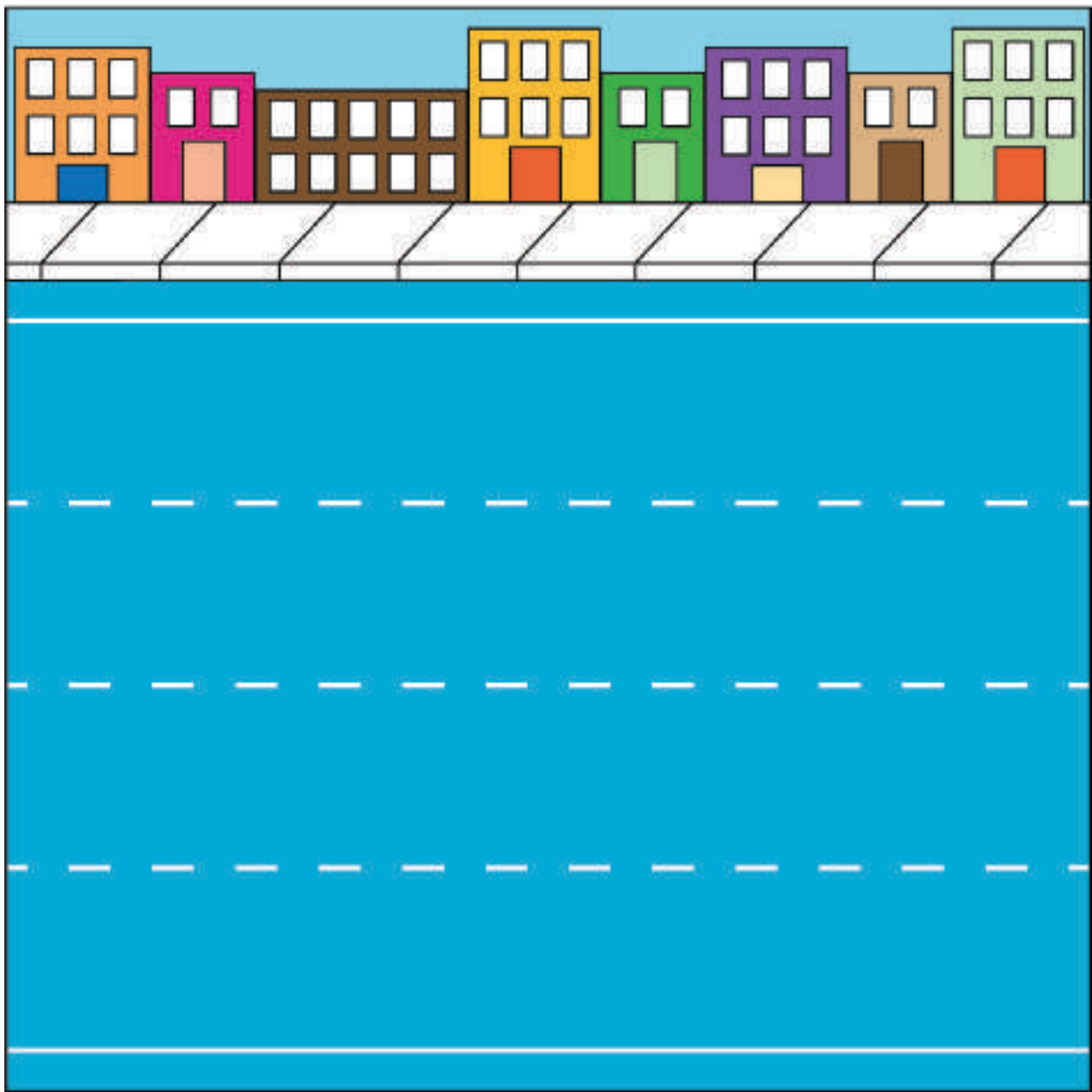
Math Libs Scenes











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5-frames Stages 1 and 2 Recording Sheet

--	--	--	--	--

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

--	--	--	--	--

1. _____

2. _____

3. _____

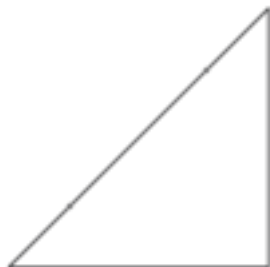
4. _____

5. _____

6. _____

Build Shapes Stage 1 and 2 Cards

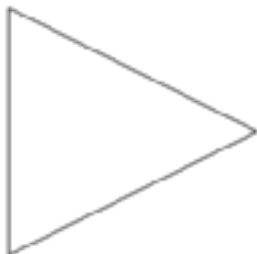
Build Shapes



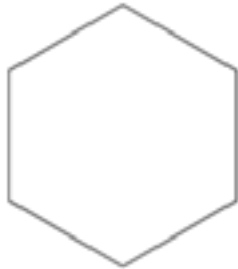
Build Shapes



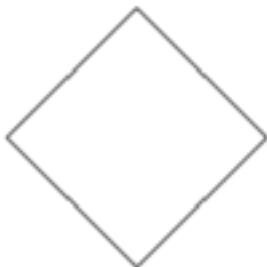
Build Shapes



Build Shapes



Build Shapes

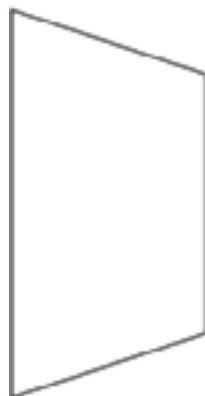


Build Shapes



Build Shapes Stage 1 and 2 Cards

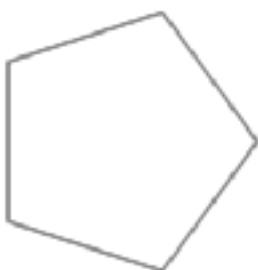
Build Shapes



Build Shapes



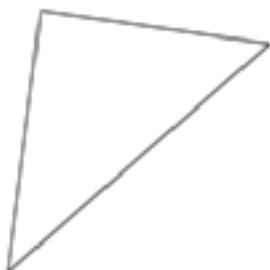
Build Shapes



Build Shapes



Build Shapes

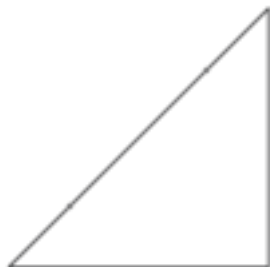


Build Shapes



Build Shapes Stage 1 and 2 Cards

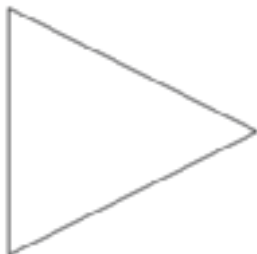
Build Shapes



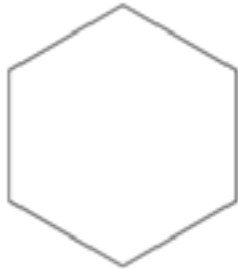
Build Shapes



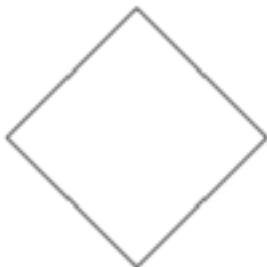
Build Shapes



Build Shapes



Build Shapes

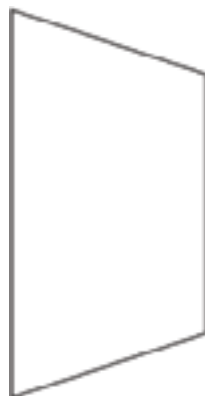


Build Shapes



Build Shapes Stage 1 and 2 Cards

Build Shapes



Build Shapes



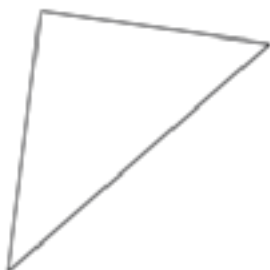
Build Shapes



Build Shapes



Build Shapes



Build Shapes

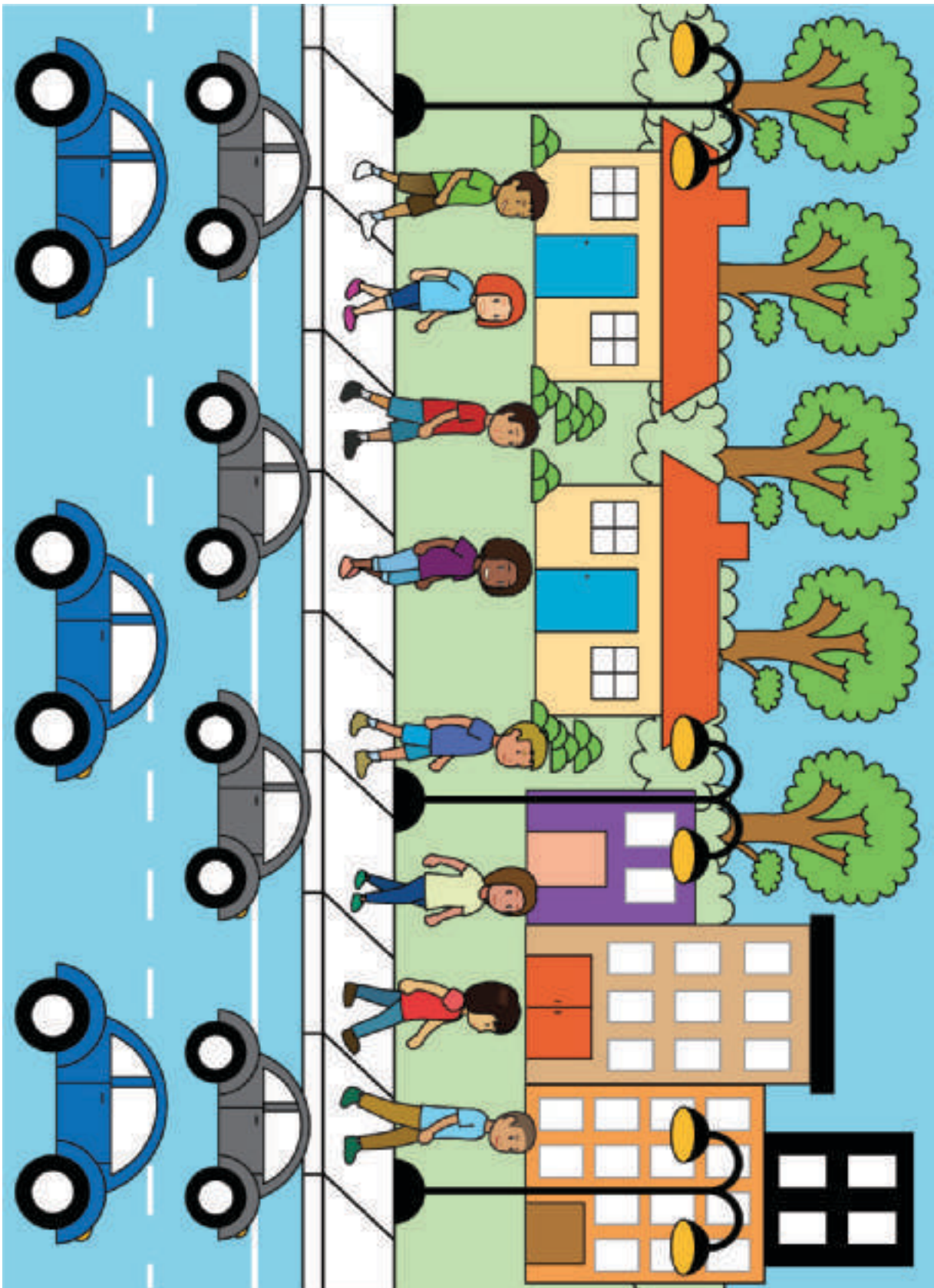


How many are there? Show how you counted.

My count:

How many? _____

Picture A



Picture B



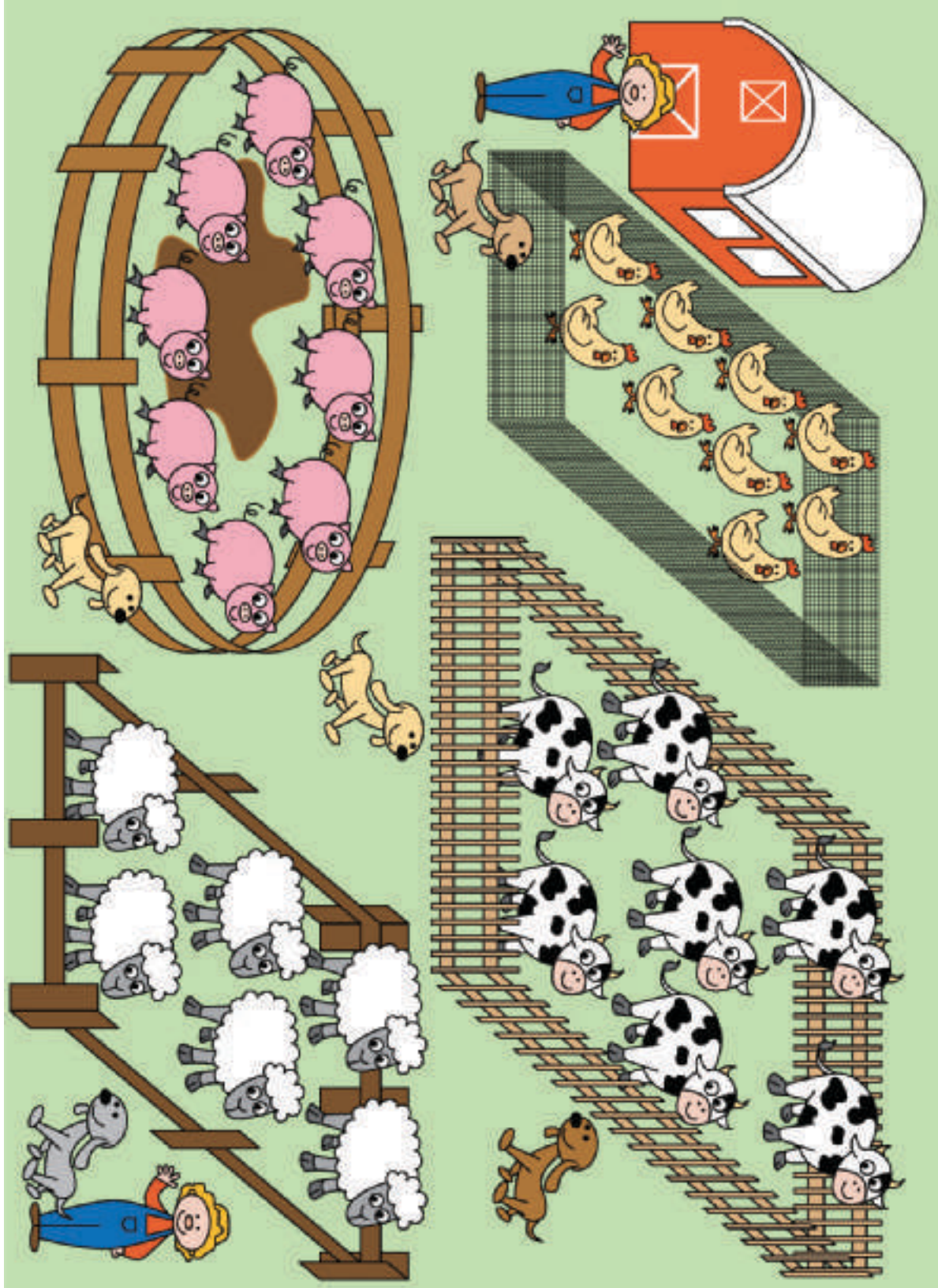
Picture C



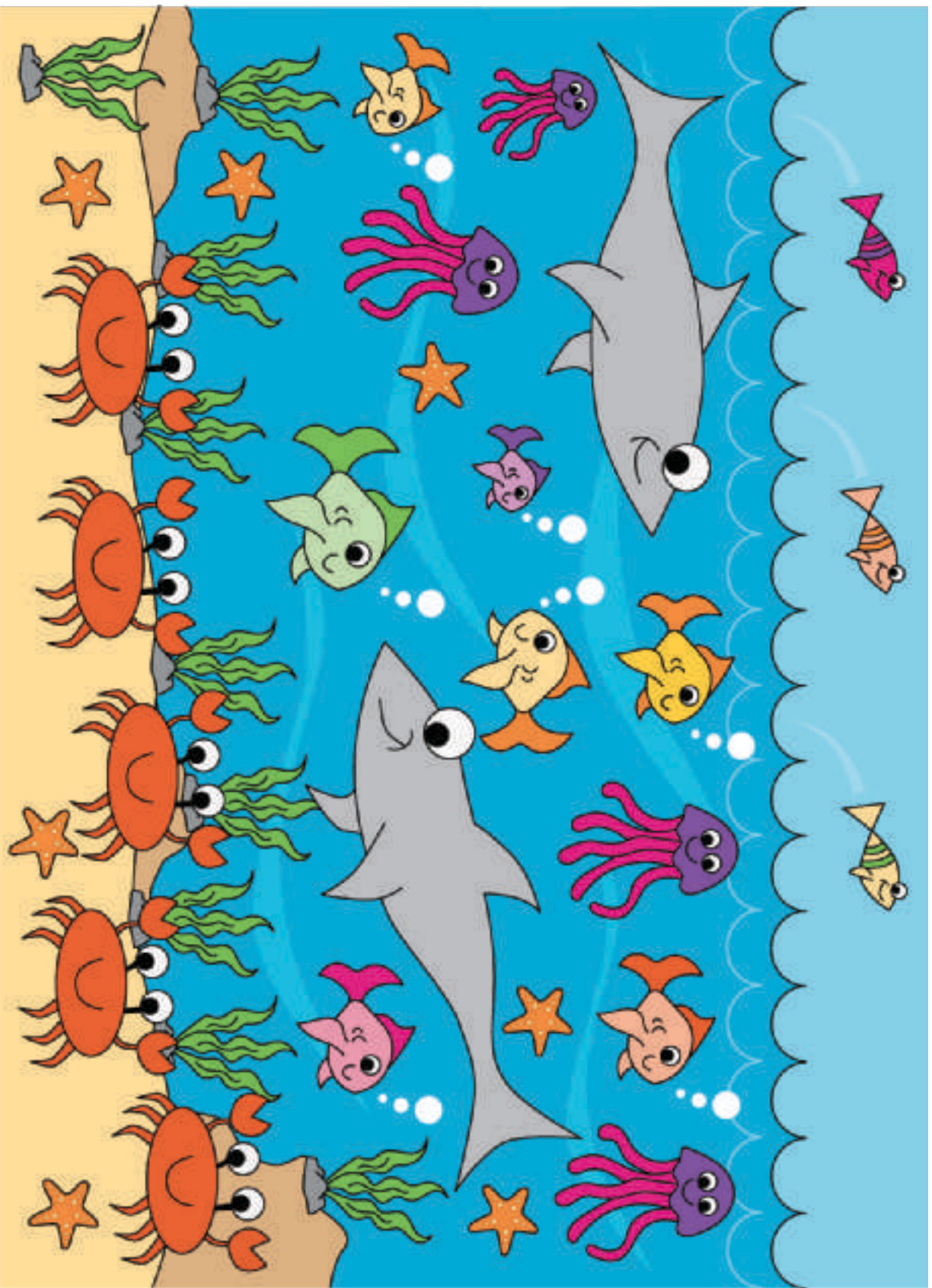
Picture D



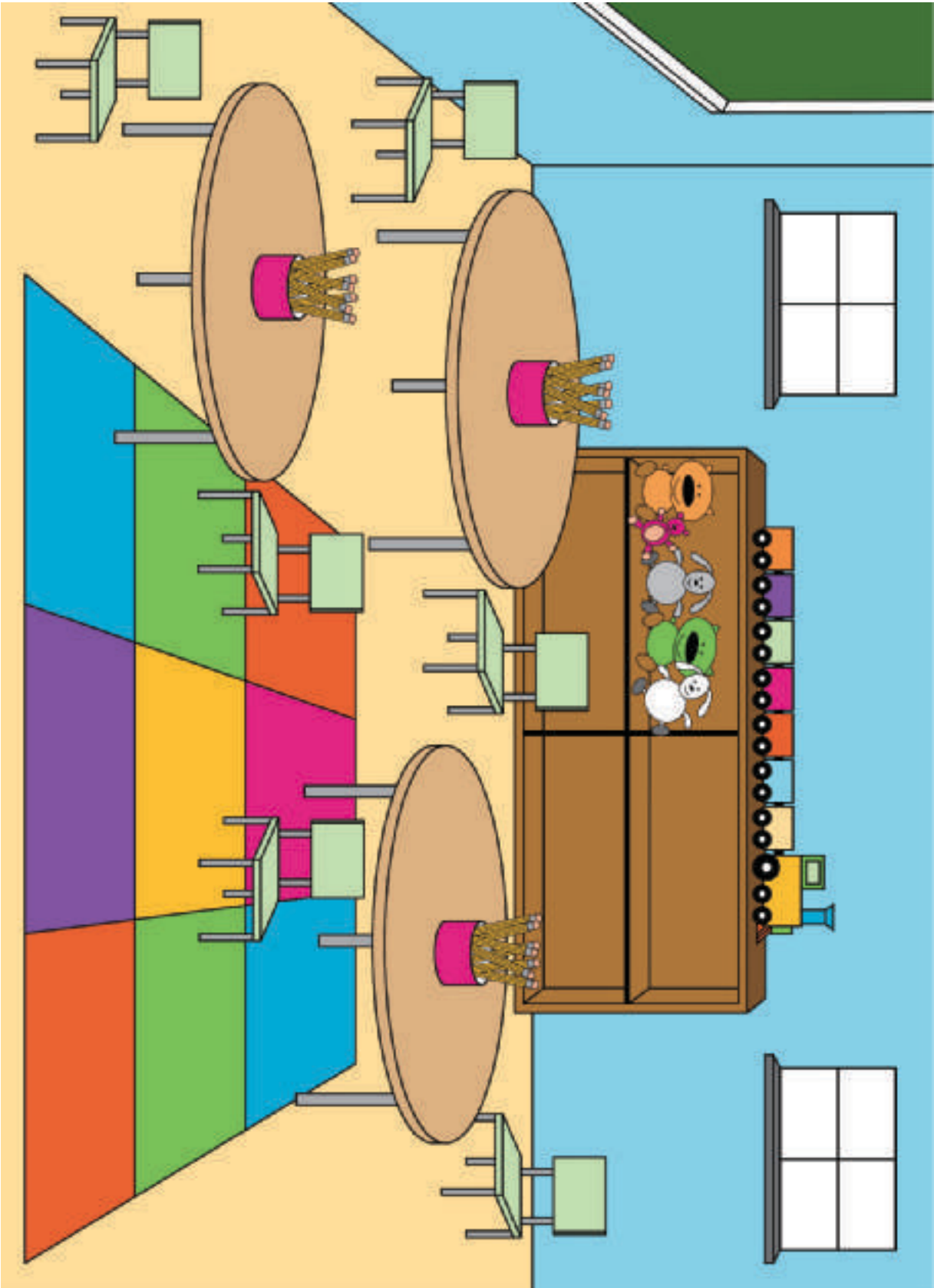
Picture E



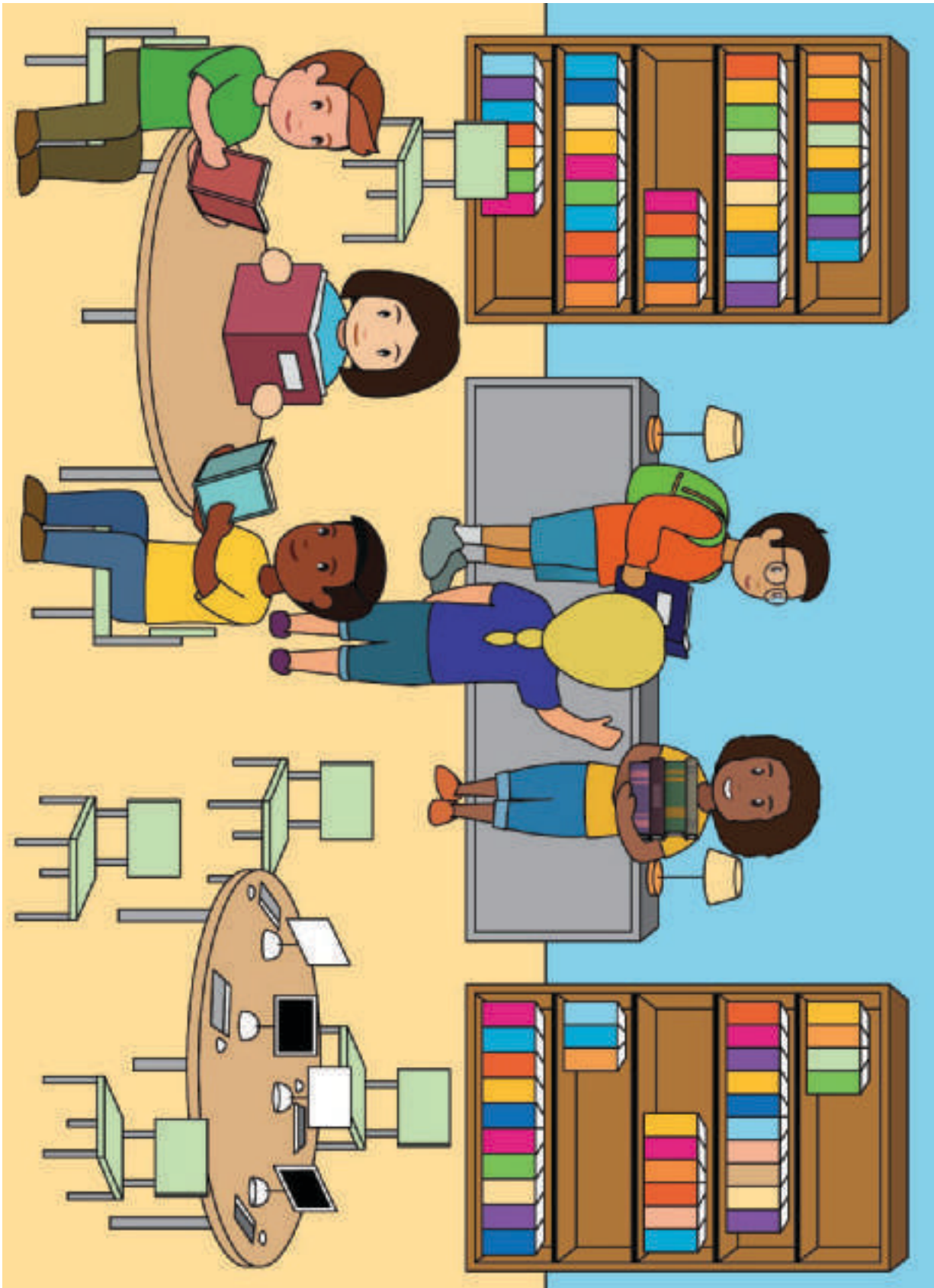
Picture F



Picture G



Picture H



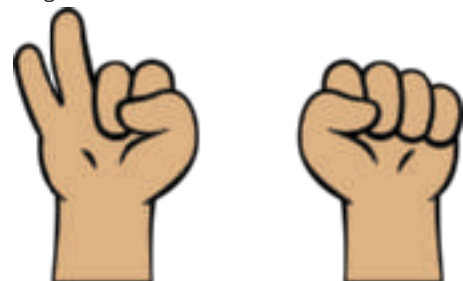
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Math Fingers Cards

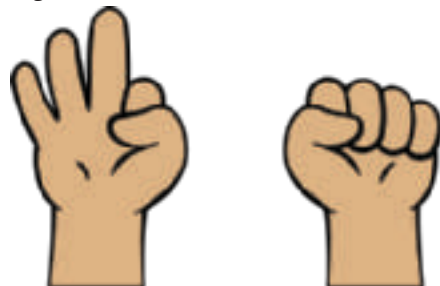
Math Fingers



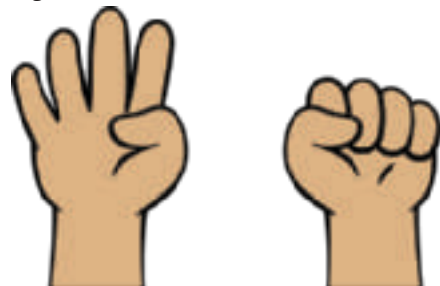
Math Fingers



Math Fingers



Math Fingers



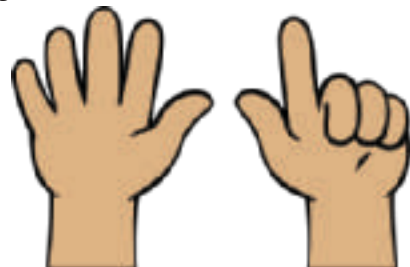
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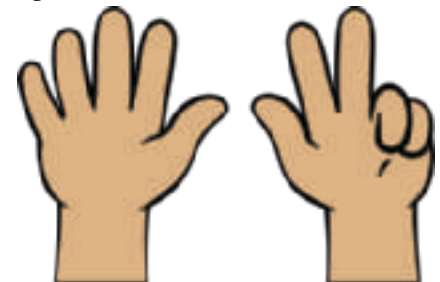
Math Fingers



Math Fingers

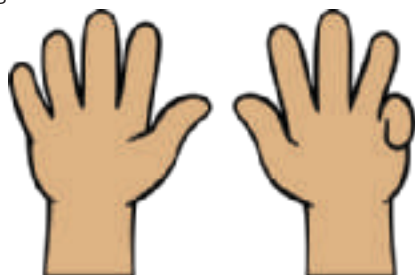


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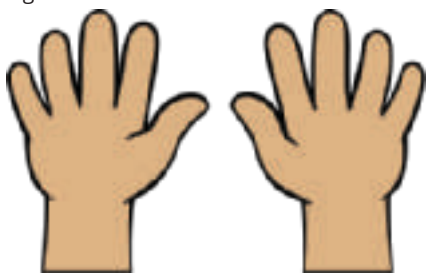


Math Fingers Cards

Math Fingers



Math Fingers

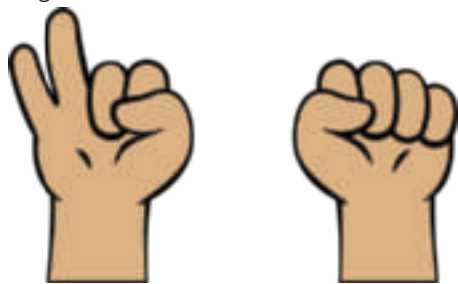


Math Fingers Cards

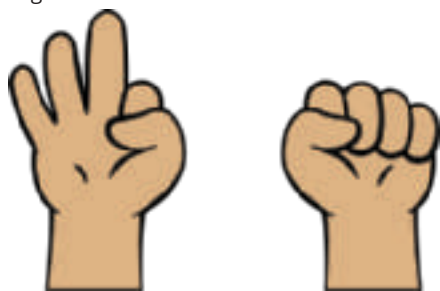
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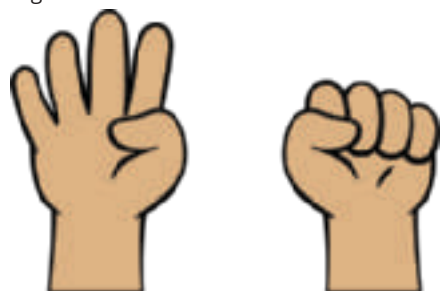
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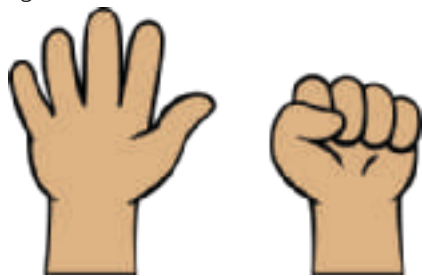
Math Fingers



Math Fingers



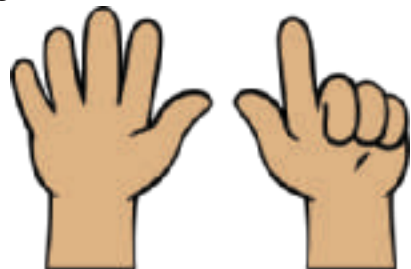
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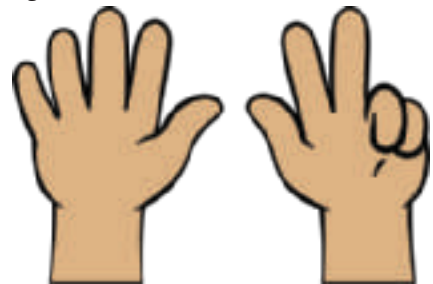
Math Fingers



Math Fingers

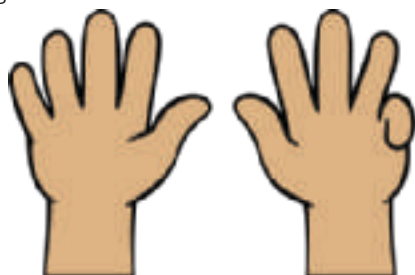


Math Fingers

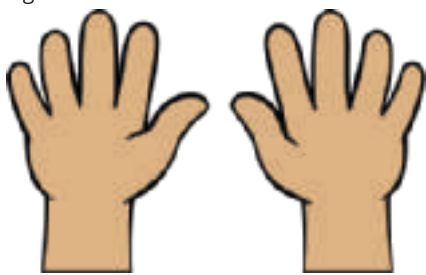


Math Fingers Cards

Math Fingers



Math Fingers



Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



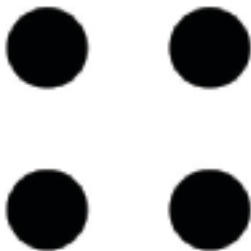
Bingo Image Card



Bingo Image Card



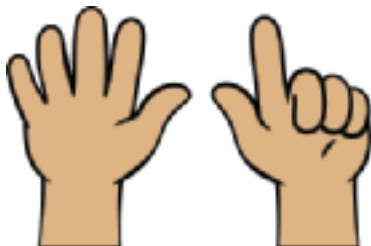
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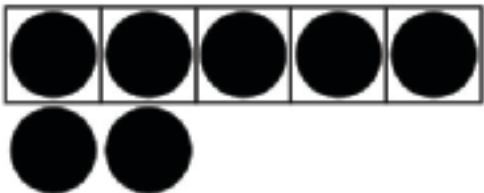
Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Stage 1 Cards

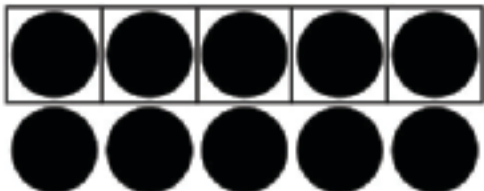
Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card

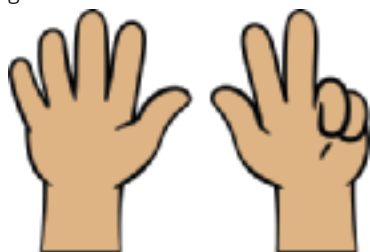


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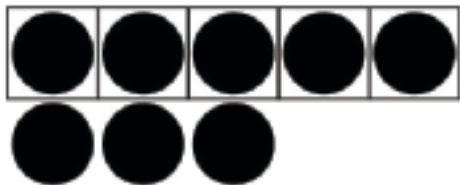


Bingo Stage 1 Cards

Bingo Image Card



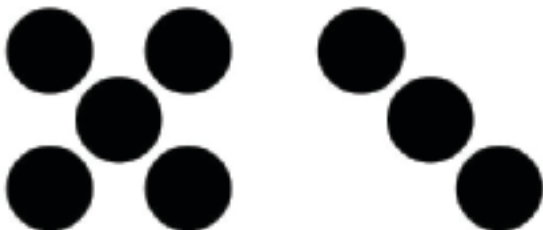
Bingo Image Card



Bingo Image Card



Bingo Image Card



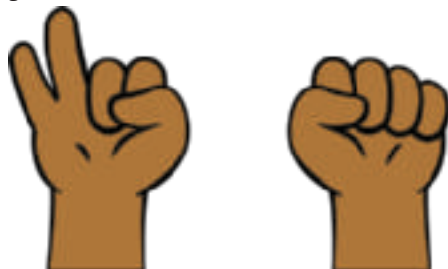
Bingo Image Card



Bingo Image Card



Bingo Image Card

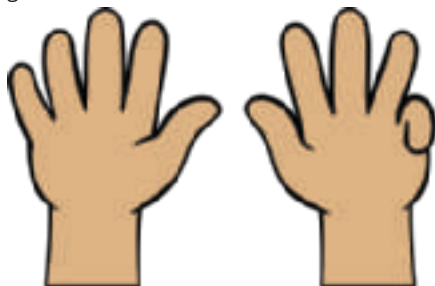


Bingo Image Card

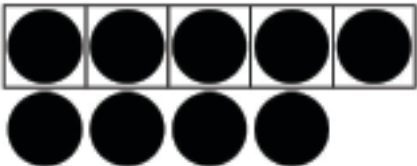


Bingo Stage 1 Cards

Bingo Image Card



Bingo Image Card



Bingo Image Card



Bingo Image Card

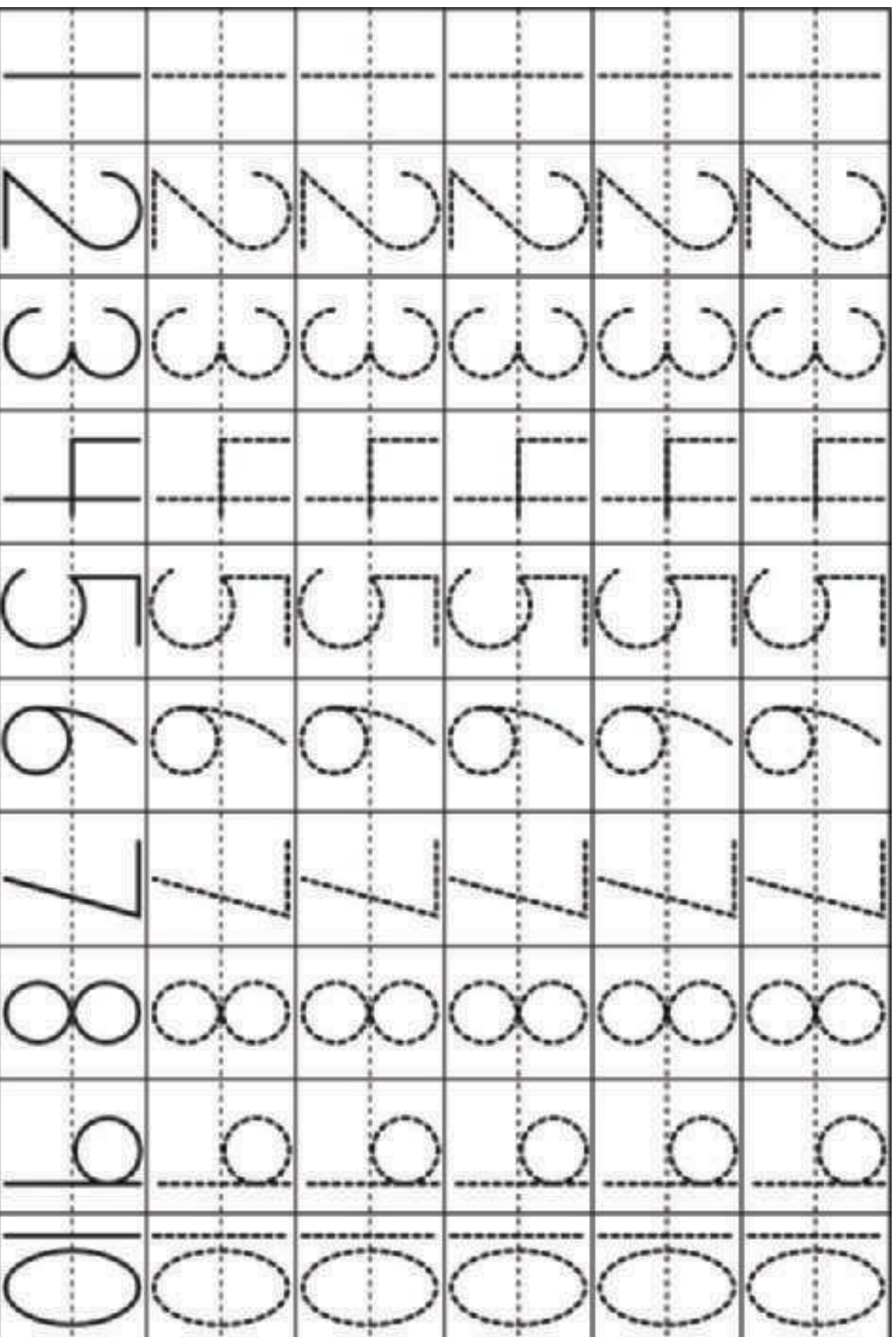


Bingo Image Card



Bingo Image Card





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.



round	Write an equation to represent the red and yellow counters.
1	
2	
3	
4	
5	
6	
7	
8	

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