

# Lesson 12: Story Problems and Diagrams

## Standards Alignments

Addressing 2.NBT.B.5, 2.OA.A.1

Building Towards 2.OA.A.1

### Teacher-facing Learning Goals

- Make sense of diagrams that represent story problems.
- Solve one-step story problems within 100.

### Student-facing Learning Goals

- Let's make sense of diagrams and solve story problems.

## Lesson Purpose

The purpose of this lesson is for students to solve story problems of different problem types within 100. Students interpret tape diagrams and connect them to different types of story problems.

In previous lessons, students solved different story problems within 50 and compared different diagrams and methods. Students interpreted and used tape diagrams to represent Compare story problems.

The problems in this lesson include some of the more challenging types (for example, Add To, Start Unknown). Students are introduced to tape diagrams as a way to represent the known and unknown quantities in Add To and Put Together / Take Apart problem types. Students are encouraged to find the unknown values in the way that makes the most sense to them. Students have opportunities to practice composing and decomposing a ten when using strategies based on adding or subtracting by place.

### Access for:

#### Students with Disabilities

- Engagement (Activity 2)

## Instructional Routines

Card Sort (Activity 2), MLR6 Three Reads (Activity 1), Notice and Wonder (Warm-up)

### Materials to Gather

- Base-ten blocks: Activity 1, Activity 2

### Materials to Copy

- Story Problem and Diagram Cards (groups)

### Lesson Timeline

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

### Teacher Reflection Question

How does matching the story problems to tape diagrams help students understand the relationship between the known and unknown quantities in a story problem? How will the work of today's lesson help students interpret and use equations to represent story problems?

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

 5 min

### Find the Match

#### Standards Alignments

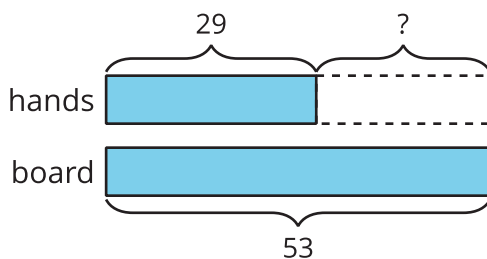
Addressing 2.OA.A.1

#### Student-facing Task Statement

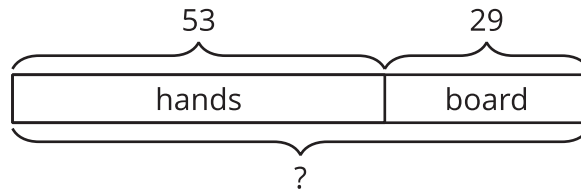
Mai is playing a game with seeds. She has some seeds in her hands and she placed 29 seeds on the game board. She has 53 seeds altogether. How many seeds are in Mai's hands?

- Circle the diagram that best matches the story problem.

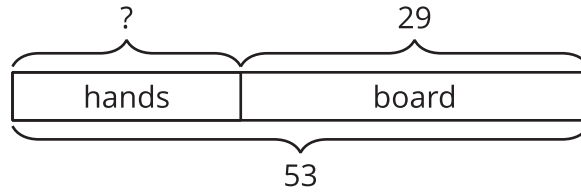
A.



B.



C.



2. Explain your choice.

**Student Responses**

1. C
2. It shows we know how many seeds Mai has altogether, but we don't know how many she has in her hands. The first part of the bar has a question mark to show that.