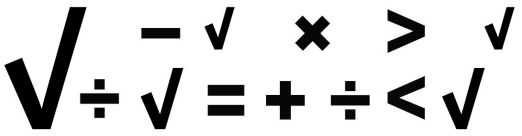
K-2 MATH
PERFORMANCE TASK
STUDENT INSTRUCTIONS

TASK TITLE
Let's Plan a Zoo

INTRODUCTION
You will use zoo animals to work with addition and subtraction situations.

SCORING CRITERIA[1]

PERFORMANCE INDICATOR	BEGINNING	DEVELOPING	PROFICIENT	EXPANDING
#4 Functions & Algebraic Reasoning: A Represent and solve problems involving addition and subtraction (of all problem types). (K.OA.1, 2, 3, 4; 1.OA.1, 2; 2.OA.1)	Identify the appropriate operation in addition and subtraction situations	Create a model to represent addition and subtraction situations	Create and use an appropriate model to represent and solve addition and subtraction problem(s)	Create multiple representations of addition and subtraction problems and explain connections between the representations and the situation(s)
#4 Functions & Algebraic Reasoning: C Explain the relationship between addition and subtraction. (1.OA.4, 8)	Describe/demonstrate the meaning of addition or subtraction by using concrete models or examples.	Describe/demonstrate the meaning of addition and subtraction using concrete models or examples.	Describe/demonstrate the relationship between addition and subtraction using concrete models or examples	Describe/demonstrate the relationship between addition and subtraction using concrete models or examples and connecting those examples to the parts of addition and subtraction equations.



Reflection and Evaluation: 1 Describe individual strengths and challenges.	**Identify** an individual strength or challenge.	**Identify** individual strength(s) and challenge(s).	**Describe** how individual strength(s) and challenge(s) impact progress toward goals.	**Analyze** individual strengths and challenges to identify strategies to overcome challenge(s) and build on strengths.

[1] Modifications were made to the Content Performance Indicators (PIs) and accompanying Scoring Criteria after the task was administered. These modifications were based on a more thoughtful interpretation of the relevant CCSS standards. Functions & Algebraic Reasoning C was eliminated and folded into A. The modified version of Functions & Algebraic Reasoning A is shown below.

The order in which the Content Scoring Criteria is printed in the document is hierarchical based on the alphabetical coding of the Performance Indicators. The team wondered if it would be more user friendly to reverse the printed order of the A and C indicators to reflect how they are aligned with parts of the task. That is to say, 4C should have appeared first since the team determined it was aligned with Part 1 and 4A should have appeared last since it was determined to be aligned with Part 2 of the task. With the ultimate elimination of the 4C Performance Indicator, this ceases to be an issue.

If the decision is made to use this task, we advise using the modified Scoring Criteria. This may require the user to make adaptations to the task before administering it to students.

PERFORMANCE INDICATOR	BEGINNING	DEVELOPING	PROFICIENT	EXPANDING
4A. Represent and solve problems (of all problem types) using the relationship between addition and subtraction. **(K.OA.1, 2, 3, 4; 1.OA.1, 2, 4, 8; 2.OA.1)**	**Identify** the appropriate operation in addition and subtraction situations.	**Represent** addition and subtraction problems.	**Represent** and **solve** problems (of all problem types) using the relationship between addition and subtraction.	**Create** multiple representations of addition and subtraction problems (of all problem types) and **explain** connections between the representations, the solutions, and the situation(s).

STUDENT DIRECTIONS AND MATERIALS[2]

TASK DIRECTIONS

1. There are 8 of the same kinds of animal in the exhibit you are planning. Some of the animals are outside their shelter and some are inside their shelter. How many of the animals might be inside their shelter and how many animals would be outside the shelter?

    a. Represent one possible way the animals could be arranged inside and outside their shelter.
    Use the large paper given to you by your teacher.

    b. Write four equations that relate to your representation in **part a**. Make sure you have two different addition and two different subtraction equations.

    _____ _____ _____ _____

    c. Choose and circle one subtraction equation from above.
    Use the equation you circled above to write a word problem for your animal exhibit.

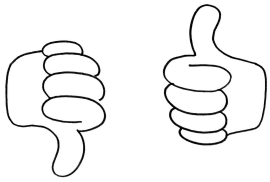
    _____

    _____

    _____

    _____

    d. How do you feel about the questions you just answered?
    Circle the picture that shows your thinking.

		
I've got this.	**I'm not sure.**	**I'm not ready yet.**

2. There are 9 gorillas playing in their exhibit. Some gorillas went inside the shelter to eat. There are 6 gorillas that stayed outside the shelter. How many gorillas went inside the shelter?

    a. Use pictures, numbers, or words to solve the problem.

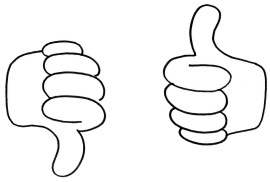
    b. Write an equation to represent the word problem.

    _____

    _____

    c. _____ gorillas went inside.

    d. How do you feel about the questions you just answered?
    Circle the picture that shows your thinking.

		
I've got this.	**I'm not sure.**	**I'm not ready yet.**

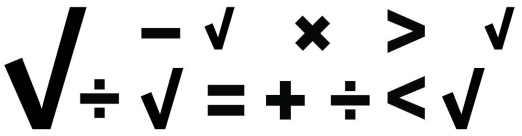
2 Teacher Suggestion: When printing the task for students, it would be helpful to include 1a - c on a single page. This will prevent students from having to go back and forth between papers/pages. Document edits should include enlarging the answer space for Parts 1a and 2a and inserting a rectangular box labeled "Exhibit" so students have a defined space for their representations.

During the calibration and scoring session, educators had these additional wonders:

- In Part 2, should there be directions that prompt students to draw a model that reflects the correct subtraction equation? We are seeing pictures that do not reflect subtraction, which is okay to help a student solve a problem, but adding another prompt could provide an opportunity for a score of Expanding (4) and also inform instruction with modeling.
- For Part 2, the language of "inside their shelter" and "outside their shelter" was wordy for kids. Should the prompt be reworded to include two different types of animals and/or two different locations? It would probably be easier to rephrase the prompt with two different locations. Teachers found this interesting because they had recently finished a science unit with shelters and habitats. They suggested the use of blacktop and grass because it is something many students are familiar with from their recess/lunchtime. That being said, there is the acknowledgment of possible bias here with respect to students' personal experiences, but in terms of authentic habitats at zoos it is reasonable.

MATERIALS

- Animal picture cards
- Large paper from your teacher for part 1a



- Pencil
- Classroom manipulatives
- Glue
- Scissors

NOTE

CHECKLIST

STUDENT REFLECTION AND/OR GOAL SETTING[3]

1. I was successful today because I . . .
2. When I had trouble today I . . .
3. Next time I think I will try to . . .

[3] The team suggested the addition of this reflection prompt: *I was successful with this math task because . . .*