

Rigor

Task Handout, Grade 1

“A social justice priority in mathematics education is to openly challenge deficit thinking and the institutional tools and practices that perpetuate static views about children and their mathematics competencies. Eliminating the deficit discourse by focusing on learning rather than labels is a key step toward a more just and equitable mathematics education.” —*National Council of Supervisors of Mathematics and TODOS: Mathematics for All*

Conceptual Understanding Task #1

Task

Materials

- A cup for each student to represent his/her cave
- Counters
- Recording sheet

Actions

The teacher begins by counting out a certain number of counters to find the total number of counters in the whole collection. For example,

One, two, three, four, five, six, seven, eight nine, ten. There are ten counters all together.

This number should be small enough that the students have already found sums equal to that number, for example, 10. The teacher then hides some in the cup, calling it a cave. The students are shown how many counters are remaining outside of the cup, but not how many are in the cup. The number outside of the cup is called the part that they know.

Next, the teacher shows the students an equation like this

$$10 - \underline{\quad} = 6$$

if the teacher is hiding 4 counters. The students need to find the missing number. By adding, or counting on to 6, the students determine that the teacher is hiding 4 counters. The equation is completed, and checked for accuracy by seeing how many counters are hidden under the cup.

The students are then asked to help the teacher find another way to play the game with the same total number and a different part that they know. The goal is to find all the subtraction equations for the total they started with. When the teacher determines that the students understand the procedures of the game, they may play independently or in partners.

Source: Available from <https://www.illustrativemathematics.org/content-standards/1/OA/B/4/tasks/1234> accessed 26 May 2018. Licensed by Illustrative Mathematics under CC BY-NY-SA 4.0.

Conceptual Understanding Task #2

Task

Malik is given a list of numbers:

1 5 10 50 100

He wants to include the following numbers so all numbers will be listed in order from least (on the left) to greatest (on the right):

49, 7, 22, 98, and 3

Where in the list should he put each of these numbers?

Source: Available from <https://www.illustrativemathematics.org/content-standards/1/NBT/B/3/tasks/6> accessed 26 May 2018. Licensed by Illustrative Mathematics under CC BY-NY-SA 4.0.

Procedural Skills and Fluency Task #1

Number Bond Roll (5 minutes)

Materials: (S) Die (with 6 replaced by 0), personal white board

Assign partners of equal ability. Each student rolls 1 die. Students use the numbers on their own die and their partner's die as the parts of a number bond. Instruct each student to write a number bond, two addition sentences, and two subtraction sentences on their boards. Once completed, the students check each other's work.

Source: EngageNY.org of the New York State Education Department. Grade 1 Mathematics, Module 1, Topic J, Lesson 39. Available from <https://www.engageny.org/resource/grade-1-mathematics-module-1-topic-j-lesson-39/file/41241> accessed 26 May 2018. Licensed by EngageNY under CC BY-NC-SA 3.0.

Procedural Skills and Fluency Task #2

Task

Materials

Large chart paper, markers, math journals, pencils, 100 chart.

Directions

Students will count the "Number of the Day" beginning with 1 on the first day of school, and adding one number for each day of school. Each day the class will chorally count up to the last number added to the 100 chart (or a hand drawn chart of numbers) by 1s or 10s. The teacher will then add the next number in the counting sequence to the chart to represent the number of the current day (this way the chart grows by one for each day students are in school).



Source: Available from <https://www.illustrativemathematics.org/content-standards/1/NBT/A/1/tasks/1078> accessed 26 May 2018. Licensed by Illustrative Mathematics under CC BY-NY-SA 4.0.

Application Task #1

Task

Pia takes some money to the store to buy school supplies. She buys some paper for \$3 and a pen for \$2. After she buys these supplies, she has \$7 left. How much money did Pia bring to the store?

Source: Available from <https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/2> accessed 26 May 2018. Licensed by Illustrative Mathematics under CC BY-NY-SA 4.0.

Application Task #2

Task

- a. There are 8 children and 6 chairs. A child sits in each chair. How many children won't have a chair?
- b. There are 8 children and some chairs. A child sits in each chair. Two children don't have a chair. How many chairs are there?
- c. There are some children and 6 chairs. A child sits in each chair. Two children don't have a chair. How many children are there?
- d. There are 8 children and 10 chairs. A child sits in each chair. How many empty chairs are there?
- e. There are 8 children and some chairs. A child sits in each chair. Two chairs are empty. How many chairs are there?
- f. There are some children and 10 chairs. A child sits in each chair. Two chairs are empty. How many children are there?

Source: Available from <https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/194> accessed 26 May 2018. Licensed by Illustrative Mathematics under CC BY-NY-SA 4.0.