

Rigor

Task Handout, Grade 2

“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

Lamar and Siri had some base-ten blocks.

Lamar said, "I can make 124 using 1 hundred, 2 tens, and 4 ones."

Siri said, "I can make 124 using 124 ones."

- a. Can you find a way to make 124 using only tens and ones? Can you find a different way?
- b. Find as many ways as you can to make 124 using hundreds, tens, and ones. If you think you have found all the ways, explain how you know your list is complete.

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Conceptual Understanding Task #2

Task

Are these comparisons true or false?

- a. 2 hundreds + 3 ones > 5 tens + 9 ones
- b. 9 tens + 2 hundreds + 4 ones < 924
- c. 456 < 5 hundreds
- d. 4 hundreds + 9 ones + 3 ones < 491
- e. 3 hundreds + 4 tens < 7 tens + 9 ones + 2 hundred
- f. 7 ones + 3 hundreds > 370
- g. 2 hundreds + 7 tens = 3 hundreds – 2 tens

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Procedural Skills and Fluency Task #1

Task

Materials

- Whiteboard or chart paper and markers
- Empty number line or magnetic cubes lined up on the whiteboard, alternating colors every 5 (see solution)
- List of expressions ready to write up on the board:
 - a. $4 + 10$
 - b. $4 + 12$
 - c. $4 + 22$
 - d. $8 + 20$
 - e. $8 + 29$

Actions

- Write the expression on the board or chart paper. Start with $4 + 10$.
- Ask students to describe their strategy for solving the problem.
- Choose one or more students to explain their strategy to the class. Represent each strategy on the board using the number line or magnetic cubes (see solution).
- Once the student's strategy is understood by the class, continue with the next sum.

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Procedural Skills and Fluency Task #2

Task

Jamir has collected some pennies in a jar. Recently, he added coins other than pennies to his jar. Jamir reached his hand into the jar and pulled out this combination:



- Jamir wants to count the total value of these coins. What coin do you suggest he start with? Why would Jamir want to start counting with this coin?
- What is the total value of these coins? Write a number sentence that represents the total value of the coins.
- Jamir reached into the jar again and was surprised to pull out a different combination of coins with the same total value as before. Draw a collection of coins that Jamir could have pulled from the jar. Write a number sentence that represents the total value of the coins.

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Application Task #1

Problem 2: Solve a single-step word problem by drawing a tape diagram and using a number bond or the arrow way to solve.

Sam has 46 red apples and some green apples. He has a total of 88 apples. How many green apples does he have?

Circulate and support students by guiding them to the realization that the unknown is a missing part.

Source: EngageNY.org of the New York State Education Department. Grade 2 Mathematics, Module 4, Topic A, Lesson 5. Available from <https://www.engageny.org/resource/grade-2-mathematics-module-4-topic-lesson-5/file/93036> accessed 26 May 2018. Licensed by EngageNY under CC BY-NC-SA 3.0.

Application Task #2

Bill the frog jumped 7 centimeters less than Robin the frog. Bill jumped 55 centimeters. How far did Robin jump?

Source: EngageNY.org of the New York State Education Department. Grade 2 Mathematics, Module 2, Topic D, Lesson 8. Available from <https://www.engageny.org/resource/grade-2-mathematics-module-2-topic-d-lesson-8/file/92561> accessed 26 May 2018. Licensed by EngageNY under CC BY-NC-SA 3.0.