

NWEA Assessment Item Illustrating K.OA.A.3

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Domain: Operations and Algebraic Thinking

K.OA.A: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Calculator Availability: No



One way to make 10 is shown.

$$10 = 5 + 5$$

Move numbers to the lines to make 10 in two different ways.

$$10 = \underline{\quad} + \underline{\quad}$$

$$10 = \underline{\quad} + \underline{\quad}$$

0 1 2 3 4 5 6 7 8 9 10

Alignment: K.OA.A.3: Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

This standard represents a critical skill for this grade. Students are asked to decompose numbers into different number pairs using concrete objects or drawings, and then translate these representations into an equation, which is a more abstract form. The work of this standard helps develop fluency with addition and subtraction basic facts as well as deeper numeracy concepts. Students learn that 10, for example, can be represented by the numerals 1 and 0, a collection of 10 objects, or expressions like $5 + 5$ or $6 + 4$. Although manipulatives are not provided here, students may draw independent representations before creating their equations. This item is intentionally designed to allow for multiple possible correct responses.

Coherence: K.OA.A.3 is related to numerous kindergarten standards. It supports the work students do solving word problems within 10.^{K.OA.A.2} It also connects to K.OA.A.4, in which students narrow their focus on decomposing numbers within 10 to finding all the number pairs that make 10. Students also compose and decompose teen numbers in K.NBT.A.1. Working with composing and decomposing within 10 supports fluency within 5 in kindergarten,^{K.OA.A.5} within 10 in grade 1,^{1.OA.C.6} and within 20 in grade 2.^{2.OA.B.2}

Rigor: This item attends to conceptual understanding and procedural skill. Decomposing numbers requires conceptual understanding of multiple representations for a given number. The item also attends to procedural skill because computing within 10 is a grade-level expectation.

