## NWEA Assessment Item Illustrating 1.OA.B.4

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Domain: Operations and Algebraic Thinking1.OA.D: Work with addition and subtraction equations.Calculator Availability: No



**Alignment: 1.OA.D.7:** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.

This standard focuses on understanding the meaning of the equal sign. When students see the equal sign, they often think incorrectly that it points to the answer instead of understanding it symbolizes that the quantities on either side are the same. Small numbers are used in this item so that it assesses the concept of equivalence and not computation.

**Coherence:** Understanding the meaning of the equal sign is a crucial area of focus and is foundational to the work that students do with the properties of operations and, eventually, algebra. In kindergarten, students represented addition and subtraction with objects and drawings so they could concretely understand what it meant to add to and take from. They also learned to represent their work with expressions and equations.<sup>K.OA.A.1, K.OA.A.2</sup> This helped them make the connection between symbolic and concrete representations of addition and subtraction. In grade 1, these understandings are needed as students work to determine the unknown whole number in an addition or subtraction equation.<sup>1.OA.D.8</sup> Understanding equivalence will also support the work that students will do in grade 2,<sup>2.OA.C.3, 2.OA.C.4</sup> when they will work with equal groups of objects as a precursor to multiplication.

**Rigor:** This item attends to conceptual understanding and procedural skill. Students need to understand the meaning of the equal sign and use a grade-level procedure when they add to find the expressions that belong on each side of the equation.

Answer Key: There are multiple equivalent correct responses. One sample correct response is shown.



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