

# Equal > Equals: Labels Affect How Math Symbols Are Interpreted

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## Abstract

How do labels affect people's interpretation of symbols? The preferred label for "=" is debated amongst mathematics educators. In Study 1, U.S. adults defined the "=" symbol and rated the "smartness" of definitions when the label "equal" or "equals" sign was used. As predicted, the "equal" label activated a relational understanding of the equal(s) sign more than the "equals" label. Study 2 utilized a 2x2 factorial design and incorporated an activation phase before the definition tasks. Participants were randomly assigned to operational activation, where they solved problems with operations to the left of the equal(s) sign ( $8 + 5 = \underline{\quad}$ ), or to relational activation, where they solved problems with operations to the right of the equal(s) sign ( $8 = 5 + \underline{\quad}$ ). Results suggest the terms "equal" and "equals" are not equivalent. The term "equal" may enhance students' conceptual understanding of equations.