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Teaching the substitutive conception of the equals sign.

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Summary: A cumulative body of research has shown that children typically shift from an operational to a relational conception of the equals sign as they move through schooling. *I. Jones* [Res. Math. Educ. 10, No. 2, 151–165 (2008; ME 2010d.00324)] argued that a truly relational conception of the equals sign comprises a substitutive component and a sameness component. Here we present two studies that build on this argument. The first investigated how the equals sign is typically presented to primary children in England, and we report that in the main an operational conception seems to be promoted. The second study measured the impact of a specially designed intervention on early secondary children's conceptions of the equals sign. Pre- and post-test data revealed that the intervention promoted substitutive and sameness components of symbolic equivalence. We consider the theoretical and pedagogical implications of the results.

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