

ZMATH 2015e.00482

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Can kindergartners do fractions?

Teach. Child. Math. 20, No. 6, 354-364 (2014).

Summary: Mathematics professor Julie Cwikla decided that she needed to investigate young children's understandings and see what precurricular partitioning notions young minds bring to the fraction table. Cwikla realized that only a handful of studies have examined how preschool-age and early elementary school-age students solve fraction problems. Minimal empirical evidence exists as to whether children can comprehend or acquire such fractional concepts before the whole-number bias is ensconced. Her research investigates the following questions: Are preschool kindergarten children capable of understanding fractional quantities; If so, are they best presented in the context of fair sharing problems? Children's naïve understanding of fair sharing and the differences in strategies for solving contextual problems among three-, four-, and five-year-olds before they had any formal instruction were examined. All seven of the fraction items in this study were framed socially, using a snack-sharing context that the children would likely find familiar. Classroom implications of precurricular understanding are outlined. (ERIC)

Classification: F31 F41 F39 F49 C31 C39 U61

Keywords: kindergarten; elementary school students; young children; mathematical concepts; concept formation; mathematics skills; preschool children; cognitive processes; vocabulary; age differences; freehand drawing

<http://www.nctm.org/publications/article.aspx?id=40518>