

**ZMATH 2003c.02308**

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**Fractional number sense strategies possessed by sixth grade students in Taiwan.**

Hiroshima J. Math. Educ. 10, 53-70 (2002).

21 sixth graders from four public schools in Taiwan were interviewed with a series of questions involving fractions designed to assess their number sense. The students were randomly selected from three different levels according to their mathematics performance. 8 students were interviewed from the low and middle level and 5 from the highest level. Interviews revealed that regardless of the level of their mathematical performance very few number sense strategies (e.g., using benchmark or number magnitude) were used. Three times as many rule-based responses were given as explanations reflecting number sense. The interview evidence also revealed that Taiwanese students were inclined to apply algorithmic rules and standard written techniques in formulating their responses. Their tendency to use paper-and-pencil procedures narrowed their approaches and stifled their thinking. Heavy reliance on rules and algorithms seem to be a major impediment to the development of their number sense. (orig.)

*Classification:* F43