

## Abstract

Students struggle when first introduced to decimals for many reasons. In our research we tried to answer the questions: (1) What difficulties do students have in reasoning about decimals and place value?; (2) What teaching strategies and representations can help students accurately compare two decimal representations?; and (3) What teaching strategies and representations can help students learn decimal addition and subtraction with understanding? Over the span of 9 weeks we worked with four students entering fifth grade. Students completed a pre- and post-interview and written assessment and attended 7 one-hour class sessions. Students worked with manipulatives and learned the concepts behind decimal numeration and the operations. W

