

1096-VE-1153      **Roger Mark Fischer\*** ([rfischer@math.montana.edu](mailto:rfischer@math.montana.edu)), 210 South Yellowstone, Apartment D, Apartment D, Bozeman, MT 59718. *Rational Numbers and the Common Core: A Descriptive Case Study*. Preliminary report.

Research suggests that middle grades teachers have a problematic sense of number. Of special concern is the well-documented tendency among these teachers to view the same number differently when its representation is changed. The Common Core State Standards for Mathematics calls for students to “develop a unified sense of number” (p. 46) and relies heavily on the decimal representation of rational numbers as a means to this end. The existing literature suggests that teacher are ill-equipped to develop a unified sense of number among their students.

The purpose of this study is to describe how a sample of middle grades teachers understands rational numbers, how they interpret a definition of rational numbers that relies on decimal representation, and how this knowledge manifests during instruction. Phase one of the study will involve a standardized open-ended interview with ten to fifteen middle grades teachers regarding their sense of rational number. Phase two will consist of observing this same group of teachers delivering lessons on repeating decimal concepts. Data will be analyzed using a multi-tiered approach of reading and memoing, describing the participants, setting, and participant actions, and classifying the data in a search for common themes. (Received September 13, 2013)