

ZMATH 2015c.00612

Young, Elaine; Reichwein Zientek, Linda

Fraction operations: an examination of prospective teachers' errors confidence, and bias.

Investig. Math. Learn. 4, No. 1, 1-23 (2011).

Summary: Fractions are important in young students' understanding of rational numbers and proportional reasoning. The teacher is fundamental in developing student understanding and competency in working with fractions. The present study spanned five years and investigated prospective teachers' competency and confidence with fraction operations as they entered a college mathematics content course designed for teachers. Results indicate prospective teachers' levels of competence vary by fraction operation. Many of the same error patterns exhibited in the 1980s and early 1990s are still exhibited today. Many prospective teachers inaccurately predict their performance on multiplying fractions with relatively prime denominators and dividing fractions.

Classification: F49 C39 C29

Keywords: teachers' confidence; fractions; rational numbers; teachers' competency; fraction operations