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Black and white marbles – older primary students’ intuitive conceptions and approaches concerning ratios.

Oesterle, Susan (ed.) et al., Proceedings of the 38th conference of the International Group for the Psychology of Mathematics Education “Mathematics education at the edge”, PME 38 held jointly with the 36th conference of PME-NA, Vancouver, Canada, July 15–20, 2014, Vol. 3. [s. 1.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-363-0/v.3). 121-128 (2014).

Summary: We encounter ratios on a daily basis. They also play an important role as a basic construct of thinking in many areas of school mathematics. For example, a fraction can be interpreted as the ratio of a part to the respective whole. Many children appear to have difficulties with fractions and although the concept of ratios is crucial for this subject area, there has been hardly any scientific research on how the understanding of ratios is developed. In this article, we will highlight, using the “marbles problems”, how children between 3rd and 6th grade handle ratios.

Classification: F42 F43 D72 D73

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