

ZMATH 1995a.00232

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Street mathematics and school mathematics.

Cambridge University Press, Cambridge (ISBN 0-521-38813-9). 178 p. (1993).

This book provides a systematic comparison of mathematics used in school and out of school, describing the two forms of activity as different cultural practices that are based upon the same mathematical principles. The studies analyze the differences and similarities between everyday and school mathematics from the psychological point of view. Chapters 2 and 3 look at working-class children's knowledge of street and school arithmetic practices. Chapter 4 describes the loss and preservation of meaning in calculation when different mathematical practices are used in problem solving. It contrasts carpenters with their school-instructed apprentices, and also farmers with students from the same area, identifying differences in their strategies and calculation routines. Chapters 5 and 6 discuss schemas related to the solution of proportions problems developed by two groups: construction foremen and fishermen. The empirical findings are analyzed within a broad theoretical framework in the concluding chapter 7, which discusses the educational implications of these findings and presents a case for realistic mathematics education - a form of teaching that builds upon formal mathematical knowledge on the foundations of street mathematics. (orig.)

Classification: F10