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A teacher's model of students' algebraic thinking about equivalent expressions.

Johnsen Høines, Marit (ed.) et al., Proceedings of the 28th international conference of the International Group for the Psychology of Mathematics Education, PME 28, Bergen, Norway, July 14–18, 2004. Bergen: Bergen University College. Part III, 1-8 (2004).

Summary: This research report describes the findings of a study on teachers' ways of interpreting student responses to tasks involving equivalent expressions. The teachers in this study were engaged in model-eliciting activities designed to promote the development of their knowledge and reveal their models (or interpretations) of their students' algebraic thinking about equivalent expressions by creating a library of their students' work. This report focuses on one teacher's model of his algebraic practice. Results showed that this teacher devoted a significant amount of time to the implementation of the algebraic unit. The teacher employed visual strategies for the first time and began to perceive their usefulness in demonstrating the equivalency of two expressions.

Classification: H23 C33 B53 A63

Keywords: algebraic thinking; visualization; graphical representation; algebraic expressions; professional development; grade 8; lower secondary

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