ZMATH 2008b.00366

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An unexpected way of thinking about linear function tables.

Novotná, Jarmila (ed.) et al., Mathematics in the centre. Proceedings of the 30th annual conference of the International Group for the Psychology of Mathematics Education, PME, Prague, Czech Republic, July 16–21, 2006. Vol. 1-5. Prague: Charles University, Faculty of Education. Part 4, 153-160 (2006).

Summary: This paper is inscribed within the research effort to produce evidence regarding primary school students' learning of algebra. Given the results obtained so far in the research community, we are convinced that students as young as third graders can successfully learn algebra. In our research, we introduce algebra from a functional perspective. A functional perspective moves away from the mere symbolic manipulation of equations and focuses on relationships between variables. In this paper, we present a case study where a third grader, Marisa, produces an unexpected strategy when trying to come up with the formula of a linear function while she was working with a function table.

Classification: H22 D42 C32
Keywords: elementary algebra; functional approach; grade 3; concept formation; function tables; case studies