Pre-algebra: a cognitive perspective.

Research in learning algebra has demonstrated the link between arithmetic and algebra, identified a gap in this transition, and proposed a pre-algebra level. This paper reports on a longitudinal study discussing this transition from a cognitive perspective. Thirty-three students in grades 7, 8, and 9 participated. Students’ readiness for algebra instruction and linear equations in terms of prerequisite knowledge was explored in order to determine what constituted a pre-algebraic level of understanding. A two-path model for the transition from arithmetic to pre-algebra to algebra is proposed and students’ understanding of relevant knowledge is discussed. Results showed a developmental sequence that appears to fit the model. (orig.)

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