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Early algebra. Research into its nature, its learning, its teaching.

ICME-13 Topical Surveys. Cham: Springer (ISBN 978-3-319-32257-5/pbk; 978-3-319-32258-2/ebook). viii, 42 p. (2016).

Publisher's description: This survey of the state of the art on research in early algebra traces the evolution of a relatively new field of research and teaching practice. With its focus on the younger student, aged from about 6 years up to 12 years, this volume reveals the nature of the research that has been carried out in early algebra and how it has shaped the growth of the field. The survey, in presenting examples drawn from the steadily growing research base, highlights both the nature of algebraic thinking and the ways in which this thinking is being developed in the primary and early middle school student. Mathematical relations, patterns, and arithmetical structures lie at the heart of early algebraic activity, with processes such as noticing, conjecturing, generalizing, representing, justifying, and communicating being central to students' engagement.

Classification: H22 H23 H32 H33