

1. Record Nr.	UNINA9910337665203321
Titolo	Mathematical Learning and Cognition in Early Childhood : Integrating Interdisciplinary Research into Practice // edited by Katherine M. Robinson, Helena P. Osana, Donna Kotsopoulos
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-12895-4
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (273 pages)
Disciplina	155.413 372.7019
Soggetti	Infant psychology Neurosciences Mathematics—Study and teaching Infancy and Early Childhood Development Mathematics Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Section I: Infancy and Preschool -- Chapter 1. Early Mathematical Minds: Interdisciplinary Perspectives on Early Mathematical Learning and Cognition -- Chapter 2. The "Girl Crisis": The Relationship between Early Gender Differences and Future Mathematical Learning and Participation -- Chapter 3. Spatial Learning and Play with Technology: How Parental Spatial Talk Differs Across Contexts -- Chapter 4. Supporting Mathematics Play in Home Environments: A Feasibility Examination of a Take-Home Bag Intervention -- Section II: The Beginnings of Formal Schooling -- Chapter 5. Early Identification of, and Interventions for, Kindergarten Students at Risk for Mathematics Difficulties -- Chapter 6. Mathematical or Computational Thinking: An Early Years Perspective -- Chapter 7. Supporting Meaningful Use of Manipulative in Kindergarten: The Role of Dual Representation in Early Mathematics -- Chapter 8. Kindergarten and First-Graders' Development of Numbers Representing Length and Area: Stories on Measurement -- Chapter 9. Young Children's Patterning Competencies

and Mathematical Development: A Review -- Section III: The Elementary School Years -- Chapter 10. Arithmetic Concepts in the Early School Years -- Chapter 11. An Integrated Approach to Mathematics and Language Theory and Pedagogy -- Chapter 12. Schema Based Instruction: Supporting Children with Learning Difficulties and Intellectual Disabilities -- Chapter 13. Tablets as Elementary Mathematics Education Tools: Are They Effective and Why -- Chapter 14. Early Understanding of Fractions via Early Understanding of Proportion and Division. .

Sommario/riassunto

This book explores mathematical learning and cognition in early childhood from interdisciplinary perspectives, including developmental psychology, neuroscience, cognitive psychology, and education. It examines how infants and young children develop numerical and mathematical skills, why some children struggle to acquire basic abilities, and how parents, caregivers, and early childhood educators can promote early mathematical development. The first section of the book focuses on infancy and toddlerhood with a particular emphasis on the home environment and how parents can foster early mathematical skills to prepare their children for formal schooling. The second section examines topics in preschool and kindergarten, such as the development of counting procedures and principles, the use of mathematics manipulatives in instruction, and the impacts of early intervention. The final part of the book focuses on particular instructional approaches in the elementary school years, such as different additive concepts, schema-based instruction, and methods of division. Chapters analyze the ways children learn to think about, work with, and master the language of mathematical concepts, as well as provide effective approaches to screening and intervention. Included among the topics: The relationship between early gender differences and future mathematical learning and participation. The connection between mathematical and computational thinking. Patterning abilities in young children. Supporting children with learning difficulties and intellectual disabilities. The effectiveness of tablets as elementary mathematics education tools. Mathematical Learning and Cognition in Early Childhood is an essential resource for researchers, graduate students, and professionals in infancy and early childhood development, child and school psychology, neuroscience, mathematics education, educational psychology, and social work.
