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Altri autori (Persone)	HarelGuershon <1952-> ConfreyJere
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Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	<p>CONTENTS; INTRODUCTION; I: THEORETICAL APPROACHES; 1. Children's Multiplying Schemes by Leslie P. Steffe; 2. Multiplicative Conceptual Field: What and Why? by Gerard Vergnaud; 3. Extending the Meaning of Multiplication and Division by Brian Greer; II: THE ROLE OF THE UNIT; 4. Ratio and Proportion: Cognitive Foundations in Unitizing and Norming by Susan J. Lamon; 5. Units of Quantity: A Conceptual Basis Common to Additive and Multiplicative Structures by Merlyn J. Behr, Guershon Harel, Thomas Post, and Richard Lesh; III: RATIO AND RATE</p> <p>6. The Development of the Concept of Speed and Its Relationship to Concepts of Rate by Patrick W. Thompson7. Missing-Value Proportional Reasoning Problems: Factors Affecting Informal Reasoning Patterns by James J. Kaput and Mary Maxwell West; IV: MULTIPLICATIVE WORLDS; 8. Splitting, Similarity, and Rate of Change: A New Approach to Multiplication and Exponential Functions by Jere Confrey; 9. Multiplicative Structures and the Development of Logarithms: What Was Lost by the Invention of Function? by Erick Smith and Jere Confrey; V: INTUITIVE MODELS</p> <p>10. The Impact of the Number Type on the Solution of Multiplication and Division Problems: Further Considerations by Guershon Harel, Merlyn Behr, Thomas Post, and Richard LeshVI: SUMMARY; 11. Multiple</p>

Sommario/riassunto

Two of the most important concepts children develop progressively throughout their mathematics education years are additivity and multiplicativity. Additivity is associated with situations that involve adding, joining, affixing, subtracting, separating and removing. Multiplicativity is associated with situations that involve duplicating, shrinking, stressing, sharing equally, multiplying, dividing, and exponentiating. This book presents multiplicativity in terms of a multiplicative conceptual field (MCF), not as individual concepts. It is presented in terms of interrelations and dependencies within, between, and among multiplicative concepts. The authors share the view that research on the mathematical, cognitive, and instructional aspects of multiplicative concepts must be situated in an MCF framework. Guershon Harel is Associate Professor of Mathematics at Purdue University Jere Confrey is Associate Professor of Education at Cornell University.
