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Sommario/riassunto	This book provides a systematic approach for the algorithmic formulation and implementation of mathematical operations in computer algebra programming languages. The viewpoint is that mathematical expressions, represented by expression trees, are the data objects of computer algebra programs, and by using a few primitive operations that analyze and construct expressions, we can implement many elementary operations from algebra, trigonometry, calculus, and differential equations. With a minimum of prerequisites this book is accessible to and useful for students of mathematics, computer science, and other technical fields. The book contains a CD with the full, searchable text and implementations of all algorithms in the Maple, Mathematica, and MuPad programming languages.