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	Sommario/riassunto	Algorithms play an increasingly important role in nearly all fields of mathematics. This book allows readers to develop basic mathematical abilities, in particular those concerning the design and analysis of algorithms as well as their implementation. It presents not only fundamental algorithms like the sieve of Eratosthenes, the Euclidean algorithm, sorting algorithms, algorithms on graphs, and Gaussian elimination, but also discusses elementary data structures, basic graph theory, and numerical questions. In addition, it provides an introduction to programming and demonstrates in detail how to implement algorithms in C++. This textbook is suitable for students who are new to the subject and covers a basic mathematical lecture course, complementing traditional courses on analysis and linear algebra. Both authors have given this "Algorithmic Mathematics" course at the University of Bonn several times in recent years.