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Collana	Synthesis Lectures on Mathematics & Statistics, , 1938-1751
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Soggetti	Computer science - Mathematics Mathematics - Data processing Number theory Mathematics Mathematics of Computing Computational Mathematics and Numerical Analysis Computational Number Theory Mathematical Applications in Computer Science Symbolic and Algebraic Manipulation
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Nota di contenuto	Python Essentials -- Number Theory -- Rational Arithmetic -- Matrix Algebra -- Polynomial Algebra -- Polynomial Applications -- Multivariate Rational Algebra -- Differentiation -- Integration.
Sommario/riassunto	This book provides a hands-on approach to computer symbolic computation using the elementary commands of Python. Symbolic computer mathematics is the study of algorithms that can be implemented as computer programs which provide exact results rather than numerical approximations. The author begins by discussing Python essentials an number theory. Then, the book covers the simplification and evaluation of expressions involving multivariate rational functions, the exact solutions of systems of linear equations, and applications of polynomial algebra. Programs in symbolic differentiation and indefinite integration programs are also developed. In addition, this book: Explains symbolic computer mathematics from a

practical perspective rather than an abstract point of view Provides an essential resource for students and professionals in mathematics and computer science Highlights the various ways that readers can implement the techniques for real-world applications About the Author Hugo D. Junghenn, Ph.D., is Emeritus Professor of Mathematics at George Washington University. He has previously served as the chair of the Department of Mathematics. Dr. Junghenn has written papers in the areas of functional analysis and topological semigroups, books in analysis, and a recent book on programming discrete mathematics.
