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Autore	Petters Arlie O
Titolo	An Introduction to Mathematical Finance with Applications : Understanding and Building Financial Intuition // by Arlie O. Petters, Xiaoying Dong
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Descrizione fisica	1 online resource (XVII, 483 p. 52 illus., 12 illus. in color.)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- 1. Preliminaries and Financial Markets -- 2. The Time Value of Money -- 3. Markowitz Portfolio Theory -- 4. Capital Market Theory and Portfolio Risk Measures -- 5. Binomial Trees and Security Pricing Modeling -- 6. Stochastic Calculus and Geometric Brownian Motion Model -- 7. Derivatives: Forwards, Futures, Swaps and Options -- 8. The BSM Model and European Option Pricing -- Index. .
Sommario/riassunto	This textbook aims to fill the gap between those that offer a theoretical treatment without many applications and those that present and apply formulas without appropriately deriving them. The balance achieved will give readers a fundamental understanding of key financial ideas and tools that form the basis for building realistic models, including those that may become proprietary. Numerous carefully chosen examples and exercises reinforce the student's conceptual understanding and facility with applications. The exercises are divided

into conceptual, application-based, and theoretical problems, which probe the material deeper. The book is aimed toward advanced undergraduates and first-year graduate students who are new to finance or want a more rigorous treatment of the mathematical models used within. While no background in finance is assumed, prerequisite math courses include multivariable calculus, probability, and linear algebra. The authors introduce additional mathematical tools as needed. The entire textbook is appropriate for a single year-long course on introductory mathematical finance. The self-contained design of the text allows for instructor flexibility in topics courses and those focusing on financial derivatives. Moreover, the text is useful for mathematicians, physicists, and engineers who want to learn finance via an approach that builds their financial intuition and is explicit about model building, as well as business school students who want a treatment of finance that is deeper but not overly theoretical.
