1. Record Nr. UNINA9910677868503321

| Autore | Alhabeeb M. J. <1954-> |
| :--- | :--- |
| Titolo | Mathematical finance [[electronic resource] /] / M.J. Alhabeeb |
| Pubbl/distr/stampa | Hoboken, $\overline{\text { N.J., }}$ : Wiley, c2012 |
| ISBN | $1-118-10691-1$ |
|  | $1-118-10690-3$ |

Disciplina 332.01/5195

| Soggetti | Finance - Mathematical models |
| :--- | :--- |
|  | Investments - Mathematics |
|  | Business mathematics |

Lingua di pubblicazione Inglese

| Formato | Materiale a stampa |
| :--- | :--- |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia Includes bibliographical references and index. <br> Nota di contenuto MATHEMATICAL FINANCE; CONTENTS; Preface; UNIT I MATHEMATICAL |  |

INTRODUCTION; 1 Numbers, Exponents, and Logarithms; 1.1.
Numbers; 1.2. Fractions; 1.3. Decimals; 1.4. Repetends; 1.5.
Percentages; 1.6. Base Amount, Percentage Rate, and Percentage Amount; 1.7. Ratios; 1.8. Proportions; 1.9. Aliquots; 1.10. Exponents; 1.11. Laws of Exponents; 1.12. Exponential Function; 1.13. Natural Exponential Function; 1.14. Laws of Natural Exponents; 1.15. Scientific Notation; 1.16. Logarithms; 1.17. Laws of Logarithms; 1.18.
Characteristic, Mantissa, and Antilogarithm; 1.19. Logarithmic Function 2 Mathematical Progressions2.1. Arithmetic Progression; 2.2. Geometric Progression; 2.3. Recursive Progression; 2.4. Infinite Geometric Progression; 2.5. Growth and Decay Curves; 2.6. Growth and Decay Functions with a Natural Logarithmic Base; 3 Statistical Measures; 3.1. Basic Combinatorial Rules and Concepts; 3.2. Permutation; 3.3. Combination; 3.4. Probability; 3.5. Mathematical Expectation and Expected Value; 3.6. Variance; 3.7. Standard Deviation; 3.8. Covariance; 3.9. Correlation; 3.10. Normal Distribution; Unit I Summary; List of Formulas; Exercises for Unit I UNIT II MATHEMATICS OF THE TIME VALUE OF MONEYIntroduction; 1 Simple Interest; 1.1. Total Interest; 1.2. Rate of Interest; 1.3. Term of Maturity; 1.4. Current Value; 1.5. Future Value; 1.6. Finding $n$ and $r$

When the Current and Future Values are Both Known; 1.7. Simple Discount; 1.8. Calculating the Term in Days; 1.9. Ordinary Interest and Exact Interest; 1.10. Obtaining Ordinary Interest and Exact Interest in Terms of Each Other; 1.11. Focal Date and Equation of Value; 1.12. Equivalent Time: Finding an Average due Date; 1.13. Partial Payments 1.14. Finding the Simple Interest Rate by the Dollar-Weighted Method2 Bank Discount; 2.1. Finding FV Using the Discount Formula; 2.2.
Finding the Discount Term and the Discount Rate; 2.3. Difference Between a Simple Discount and a Bank Discount; 2.4. Comparing the Discount Rate to the Interest Rate; 2.5. Discounting a Promissory Note; 2.6. Discounting a Treasury Bill; 3 Compound Interest; 3.1. The Compounding Formula; 3.2. Finding the Current Value; 3.3. Discount Factor; 3.4. Finding the Rate of Compound Interest; 3.5. Finding the Compounding Term; 3.6. The Rule of 72 and Other Rules 3.7. Effective Interest Rate3.8. Types of Compounding; 3.9. Continuous Compounding; 3.10. Equations of Value for a Compound Interest; 3.11. Equated Time For a Compound Interest; 4 Annuities; 4.1. Types of Annuities; 4.2. Future Value of an Ordinary Annuity; 4.3. Current Value of an Ordinary Annuity; 4.4. Finding the Payment of an Ordinary Annuity; 4.5. Finding the Term of an Ordinary Annuity; 4.6. Finding the Interest Rate of an Ordinary Annuity; 4.7. Annuity Due: Future and Current Values; 4.8. Finding the Payment of an Annuity Due; 4.9. Finding the Term of an Annuity Due 4.10. Deferred Annuity

Sommario/riassunto
An introduction to the mathematical skills needed to understand finance and make better financial decisions Mathematical Finance enables readers to develop the mathematical skills needed to better understand and solve financial problems that arise in business, from small entrepreneurial operations to large corporations, and to also make better personal financial decisions. Despite the availability of automated tools to perform financial calculations, the author demonstrates that a basic grasp of the underlying mathematical formulas and tables is essential to truly understand finan

