1. Record Nr. UNINA9910786641603321 Autore Ball Derek <1942-> Titolo An introduction to real analysis / / Derek G. Ball Pubbl/distr/stampa Oxford, England:,: Pergamon Press,, 1973 ©1973 **ISBN** 1-4831-5896-9 Edizione [First edition.] Descrizione fisica 1 online resource (324 p.) Commonwealth and International Library. Mathematical Topics Collana Disciplina 515 Soggetti Mathematical analysis Numbers, Real Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Front Cover: An Introduction to Real Analysis: Copyright Page: Table of Nota di contenuto Contents; PREFACE; INTRODUCTION. THE PURPOSE OF REAL ANALYSIS; CHAPTER 1. SETS, RELATIONS, AND FUNCTIONS; 1.1. Sets; 1.2. Relations and Functions; CHAPTER 2. NUMBERS; 2.1. Natural numbers; 2.2. Integers; 2.3. Rationals; 2.4. Real Numbers; 2.5. Irrationals; 2.6. Appendix; CHAPTER 3. SEQUENCES; 3.1. Introduction; 3.2. Limits of sequences; 3.3. Elementary theorems about sequences; 3.4. Behaviour of monotonie sequences; 3.5. Sequences defined by recurrence relations; 3.6. More sequences and their limits 3.7. Upper and lower limitsCHAPTER 4. SERIES; 4.1. Introduction; 4.2. Convergence of a series; 4.3. More series, convergent and divergent; 4.4 The comparison test; 4.5. Decimal representation; 4.6. Absolute convergence; 4.7. Conditional convergence; 4.8. Rearrangement of series; 4.9. Multiplication of series; CHAPTER 5. FUNCTIONS OF A REAL VARIABLE; 5.1. Introduction; 5.2. Limits; 5.3. Properties of limits; 5.4. Continuity; 5.5. The place of pathological functions in real analysis; 5.6. The nature of discontinuities; 5.7. Properties of continuous functions; CHAPTER 6. THE DERIVATIVE

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Sommario/riassunto

An Introduction to Real Analysis presents the concepts of real analysis and highlights the problems which necessitate the introduction of these concepts. Topics range from sets, relations, and functions to numbers, sequences, series, derivatives, and the Riemann integral. This volume begins with an introduction to some of the problems which are met in the use of numbers for measuring, and which provide motivation for the creation of real analysis. Attention then turns to real numbers that are built up from natural numbers, with emphasis on integers, rationals, and irrationals. The chapters tha