Record Nr. UNINA9910438159003321 Autore Furdui Ovidiu Titolo Limits, Series, and Fractional Part Integrals: Problems in Mathematical Analysis / / by Ovidiu Furdui New York, NY:,: Springer New York:,: Imprint: Springer,, 2013 Pubbl/distr/stampa **ISBN** 1-4614-6762-4 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (288 p.) Collana Problem Books in Mathematics, , 0941-3502 Disciplina 515.076 Soggetti Mathematical analysis Analysis (Mathematics) Sequences (Mathematics) Functions, Special **Analysis** Sequences, Series, Summability Special Functions 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 (pages 267-271) and index. Preface -- Notations -- 1. Limits -- 2. Fractional Part Integrals -- 3. A Nota di contenuto Bouquet of Series -- A. Elements of Classical Analysis -- B. Stolz-Cesàro Lemma -- References -- Index. Limits, Series, and Fractional Part Integrals: Problems in Mathematical Sommario/riassunto Analysis features original problems in classical analysis that invite the reader to explore a host of strategies and mathematical tools used for solving real analysis problems. The book is designed to fascinate the novice, puzzle the expert, and trigger the imaginations of all. The text is geared toward graduate students in mathematics and engineering, researchers, and anyone who works on topics at the frontier of pure and applied mathematics. Moreover, it is the first book in mathematical literature concerning the calculation of fractional part integrals and series of various types. Most problems are neither easy nor standard and deal with modern topics of classical analysis. Each chapter has a

section of open problems that may be considered as research projects for students who are taking advanced calculus classes. The intention of

having these problems collected in the book is to stimulate the

creativity and the discovery of new and original methods for proving known results and establishing new ones. The book is divided into three parts, each of them containing a chapter dealing with a particular type of problems. The first chapter contains problems on limits of special sequences and Riemann integrals; the second chapter deals with the calculation of special classes of integrals involving a fractional part term; and the third chapter hosts a collection of problems on the calculation of series (single or multiple) involving either a numerical or a functional term.