1. Record Nr.   UNINA9910299778403321

   Autore   Bulajich Manfrino Radmila

   Titolo   Topics in Algebra and Analysis : Preparing for the Mathematical
                        Olympiad / / by Radmila Bulajich Manfrino, José Antonio Gómez
                        Ortega, Rogelio Valdez Delgado

   Pubbl/distr/stampa   Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, ,
                        2015

   ISBN   3-319-11946-X

   Edizione   [1st ed. 2015.]

   Descrizione fisica   1 online resource (319 p.)

   Disciplina   512

   Soggetti   Number theory
                        Difference equations
                        Functional equations
                        Sequences (Mathematics)
                        Number Theory
                        Difference and Functional Equations
                        Sequences, Series, Summability

   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 [307]-308) and index.

   Nota di contenuto   1. Preliminaries -- 2 Progressions and finite sums -- 3 Induction
                        principle -- 4 Quadratic and cubic polynomials -- 5 Complex numbers
                        -- 6 Functions and functional equations -- 7 Sequences and series --
                        8 Polynomials -- 9 Problems -- 10 Solutions of the exercises and
                        problems -- Notation -- Bibliography -- Index.

   Sommario/riassunto   The techniques presented here are useful for solving mathematical
                        contest problems in algebra and analysis. Most of the examples and
                        exercises that appear in the book originate from mathematical
                        Olympiad competitions around the world. In the first four chapters the
                        authors cover material for competitions at high school level. The level
                        advances with the chapters. The topics explored include polynomials,
                        functional equations, sequences and an elementary treatment of
                        complex numbers. The final chapters provide a comprehensive list of
                        problems posed at national and international contests in recent years,
                        and solutions to all exercises and problems presented in the book. It

helps students in preparing for national and international mathematical contests form high school level to more advanced competitions and will also be useful for their first year of mathematical studies at the university. It will be of interest to teachers in college and university level, and trainers of the mathematical Olympiads.