

1. Record Nr.	UNINA9910300256103321
Autore	Grigorieva Ellina
Titolo	Methods of Solving Nonstandard Problems / / by Ellina Grigorieva
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2015
ISBN	3-319-19887-4
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XXI, 327 p. 11 illus., 2 illus. in color.)
Disciplina	515
Soggetti	Algebra Mathematical analysis Analysis (Mathematics) Geometry Number theory Mathematics—Study and teaching Analysis Number Theory Mathematics Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Solving Problems Using Properties of Functions -- Polynomials -- Problems from Trigonometry.- Unusual and Nonstandard Problems -- References -- Index.
Sommario/riassunto	This book, written by an accomplished female mathematician, is the second to explore nonstandard mathematical problems – those that are not directly solved by standard mathematical methods but instead rely on insight and the synthesis of a variety of mathematical ideas. It promotes mental activity as well as greater mathematical skills, and is an ideal resource for successful preparation for the mathematics Olympiad. Numerous strategies and techniques are presented that can be used to solve intriguing and challenging problems of the type often found in competitions. The author uses a friendly, non-intimidating approach to emphasize connections between different fields of mathematics and often proposes several different ways to attack the

same problem. Topics covered include functions and their properties, polynomials, trigonometric and transcendental equations and inequalities, optimization, differential equations, nonlinear systems, and word problems. Over 360 problems are included with hints, answers, and detailed solutions. Methods of Solving Nonstandard Problems will interest high school and college students, whether they are preparing for a math competition or looking to improve their mathematical skills, as well as anyone who enjoys an intellectual challenge and has a special love for mathematics. Teachers and college professors will be able to use it as an extra resource in the classroom to augment a conventional course of instruction in order to stimulate abstract thinking and inspire original thought.
