1. Record Nr. UNINA9910971363803321 Autore Kazarinoff Nicholas D **Titolo** Geometric inequalities / / by Nicholas D. Kazarinoff Washington, DC,: Mathematical Association of America, 1961 Pubbl/distr/stampa **ISBN** 0-88385-922-X Edizione [1st ed.] 1 online resource (132 pages) : digital, PDF file(s) Descrizione fisica Anneli Lax New Mathematical Library;; no. 4 Collana 513.1 Disciplina Geometry, Plane Soggetti Inequalities (Mathematics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from publisher's bibliographic system (viewed on 02 Oct 2015). Nota di contenuto Front Cover -- Geometric Inequalities -- Copyright Page -- CONTENTS -- Preface -- Chapter 1. Arithmetic and Geometric Means -- 1.1 Fundamentals -- 1.2 The Theorem of Arithmetic and Geometric Means -- Chapter 2. Isoperimetric Theorems -- 2.1 Maxima and minima --2.2 Isoperimetric theorems for triangles -- 2.3 Isoperimetric theorems for polygons -- 2.4 Steiner's attempt -- Chapter 3. The Reflection Principle -- 3.1 Symmetry -- 3.2 Dido's problem -- 3.3 Steiner symmetrization -- 3.4 Conic sections -- 3.5 Triangles -- Chapter 4. Hints and Solutions -- Index of Numhered Theorems -- Back Cover. Sommario/riassunto Anybody who liked their first geometry course (and some who did not) will enjoy the simply stated geometric problems about maximum and minimum lengths and areas in this book. Many of these already fascinated the Greeks, for example, the problem of enclosing the largest possible area by a fence of given length, and some were solved long ago; but others remain unsolved even today. Some of the solutions of the problems posed in this book, for example the problem of inscribing a triangle of smallest perimeter into a given triangle, were supplied by world famous mathematicians, other by high school

students.