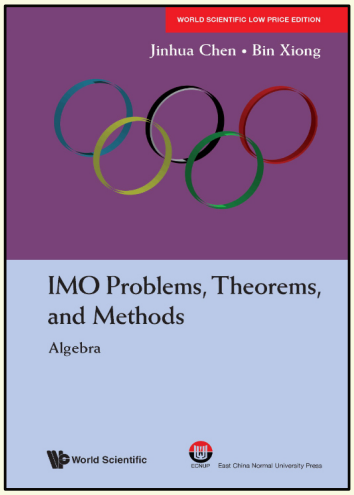
IMO Problems, Theorems, and Methods

Algebra



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ABOUT THE BOOK

The problems in the International Mathematical Olympiad (IMO) are not only novel and interesting but also deeply rooted in profound mathematical context. The team at the International Mathematical Olympiad Research Center at East China Normal University has compiled and studied problems from past IMOs, dividing them into four volumes based on the mathematical fields involved: algebra, geometry, number theory, and combinatorics.

In the algebra volume, the IMO algebra problems are organized into five chapters: "Equation Problems," "Function Problems," "Sequence Problems," "Inequality Problems," and "Other Algebra Problems." Each chapter begins with an introduction to the relevant foundational knowledge and methods, followed by a reclassification and reorganization of past IMO problems. Multiple elegant solutions are provided for some of the problems, along with a statistical analysis of their difficulty.

The book concludes with a record of past IMO participation and award information, as well as an index of algebra problems, facilitating further study and convenient reference. This series is suitable for researchers in mathematical competitions, mathematics educators, and contestants.

READERSHIP

Students engaged in mathematical competition, coaches in mathematics teaching, and teachers setting up math elective courses.

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Contd.

- Sequence Problems
- Inequality Problems
- Other Algebra Problems
- IMO General Information
- IMO Algebra Problem Index

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