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Migration in a Globalised World

In this new Brookings Marshall Paper, Michael O'Hanlon argues that now is the time for Western nations to negotiate a new security architecture for neutral countries in eastern Europe to stabilize the region and reduce the risks of war with Russia. He believes NATO expansion has gone far enough. The core concept of this new security architecture would be one of permanent neutrality. The countries in question collectively make a broken-up arc, from Europe's far north to its south: Finland and Sweden; Ukraine, Moldova, and Belarus; Georgia, Armenia, and Azerbaijan; and finally Cyprus plus Serbia, as well as possibly several other Balkan states. Discussion on the new framework should begin within NATO, followed by deliberation with the neutral countries themselves, and then formal negotiations with Russia. The new security architecture would require that Russia, like NATO, commit to help uphold the security of Ukraine, Georgia, Moldova, and other states in the region. Russia would have to withdraw its troops from those countries in a verifiable manner; after that, corresponding sanctions on Russia would be lifted. The neutral countries would retain their rights to participate in multilateral security operations on a scale comparable to what has been the case in the past, including even those operations that might be led by NATO. They could think of and describe themselves as Western states (or anything else, for that matter). If the European Union and they so wished in the future, they could join the EU. They would have complete sovereignty and self-determination in every sense of the word. But NATO would decide not to invite them into the alliance as members. Ideally, these nations would endorse and promote this concept themselves as a more practical way to ensure their security than the current situation or any other plausible alternative.

Lemmas in Olympiad Geometry

This problem-solving book is an introduction to the study of Diophantine equations, a class of equations in which only integer solutions are allowed. The presentation features some classical Diophantine equations, including linear, Pythagorean, and some higher degree equations, as well as exponential Diophantine equations. Many of the selected exercises and problems are original or are presented with original solutions. An Introduction to Diophantine Equations: A Problem-Based Approach is intended for undergraduates, advanced high school students and teachers, mathematical contest participants — including Olympiad and Putnam competitors — as well as readers interested in essential mathematics. The work uniquely presents unconventional and non-routine examples, ideas, and techniques.

Story-Based Inquiry: A Manual for Investigative Journalists

This text provides a theoretical background for several topics in combinatorial mathematics, such as enumerative combinatorics (including partitions and Burnside's lemma), magic and Latin squares, graph theory, extremal combinatorics, mathematical games and elementary probability. A number of examples are given with explanations while the book also provides more than 300 exercises of different levels of difficulty that are arranged at the end of each chapter, and more than 130 additional challenging problems, including problems from mathematical olympiads. Solutions or hints to all exercises and problems are included. The book can be used by secondary school students preparing for mathematical competitions, by their instructors, and by undergraduate students. The book may also be useful for graduate students and for researchers that apply combinatorial methods in different areas.

Narrative Approaches to the International Mathematical Problems

The International Mathematical Olympiad (IMO) is a very important competition for high school students. China has taken part in the IMO 31 times since 1985 and has won the top ranking for countries 19 times, with a multitude of gold medals for individual students. The six students China has sent every year were selected from 60 students among approximately 300 students who took part in the annual China Mathematical Competition during the winter months. This book includes the problems and solutions of the most important mathematical competitions from 2010 to 2014 in China, such as China Mathematical Competition, China Mathematical Olympiad, China Girls' Mathematical Olympiad. These problems are almost exclusively created by the experts who are engaged in mathematical competition teaching and researching. Some of the solutions are from national training team and national team members, their wonderful solutions being the feature of this book. This book is useful to mathematics fans, middle school students engaged in mathematical competition, coaches in mathematics teaching and teachers setting up math elective courses.

The IMO Compendium

A collection of problems put together by coaches of the U.S. International Mathematical Olympiad Team.

Problem-Solving and Selected Topics in Euclidean Geometry

Challenging problems in maths plus solutions to those featured in the earlier Olympiad book.

Lecture Notes on Mathematical Olympiad Courses

Harold McGee's *On Food and Cooking* is a kitchen classic. Hailed by *Time* magazine as "a minor masterpiece" when it first appeared in 1984, *On Food and Cooking* is the bible to which food lovers and professional chefs worldwide turn for an understanding of where our foods come from, what exactly they're made of, and how cooking transforms them into something new and delicious. Now, for its twentieth anniversary, Harold McGee has prepared a new, fully revised and updated edition of *On Food and Cooking*. He has rewritten the text almost completely, expanded it by two-thirds, and commissioned more than 100 new illustrations. As compulsively readable and engaging as ever, the new *On Food and Cooking* provides countless eye-opening insights into food, its preparation, and its enjoyment. *On Food and Cooking* pioneered the translation of technical food science into cook-friendly kitchen science and helped give birth to the inventive culinary movement known as "molecular gastronomy." Though other books have now been written about kitchen science, *On Food and Cooking* remains unmatched in the accuracy, clarity, and thoroughness of its explanations, and the intriguing way in which it blends science with the historical evolution of foods and cooking techniques. Among the major themes addressed throughout this new edition are: Traditional and modern methods of food production and their influences on food quality The great diversity of methods by which people in different places and times have prepared the same ingredients Tips for selecting the best ingredients and preparing them successfully The particular substances that give foods their flavors and that give us pleasure Our evolving knowledge of the health benefits and risks of foods *On Food and Cooking* is an invaluable and monumental compendium of basic information about ingredients, cooking methods, and the pleasures of eating. It will delight and fascinate anyone who has ever cooked, savored, or wondered about food.

Mathematical Olympiads 1999-2000

We live in an era where the university system is undergoing great changes owing to developments in financing policies and research priorities, as well as changes in the society in which this system is embedded. This change toward a more market-oriented university, which also has immediate effects in academic peripheries such as the Balkans, the Middle East, or

South-East Asia, is of great influence for the pedagogical practice of "less profitable" academic areas such as the Humanities: philosophy, languages, sociology, anthropology, history. This volume (presented in a dual-language English-Albanian edition) comprises papers culled from continent. journal's Pedagogies of Disaster conference held in Tirana, Albania, hosted by The Department of Eagles (Departamenti i Shqiponjave) in June 2013, and organized to address the fate of relation and the future of pedagogical practice in the University, and especially as it concerns the humanities. The papers gathered here seek to address the infrastructural or interpersonal changes in the modes of production as it relates to current academia, examining the elements and spaces of the rifts opening up in the polis of the University-its students, professors and administrators. The volume further addresses the pedagogical horizon at a critical limit, asking: for whom or for what are we teaching and from whom or from what are we learning? Vincent W.J. van Gerven Oei · Opening // Christopher Fynsk · A Pedagogy on the Verge of Disaster // Oliver Feltham · Desocializing the School: Education and the Action-Zone // Adam Staley Groves · Sandy Hook University: Poetic Violence, Scope, and Style of Imagination // Julia Hölzl · A Call for Thinking (The Disaster) // John Van Houdt · The Rhetoric of Disaster: Surviving the End of the Humanities // Vincent W.J. van Gerven Oei · A Passion for Yes: Coming Out and Affirmation // Edith Doron · Welcoming the Stranger: From Social Inclusion to Exilic Education // Urok Shirhan · Occupy Baghdad: On the Occupation of Images // Jonas Staal · Art After Democratism: The Pedagogy of the New World Summit // Katharina Stadler · "Reading on Disaster" Intervention: Imaginaries in Participatory Artistic Practice // Manifesto for Education in Albania // Andreas Vrahimis · Philosophy and Humanistic Education: J.S. Mill's Catastrophic Pedagogy // Matthew Charles · Walter Benjamin and the Inhumanities: Towards a Pedagogical Anti-Nietzscheanism // Nico Jenkins · Philosophy beyond the Peras: Thinking with/in the Periphery // Justin Joque · Cyber-Catastrophe: Towards a New Pedagogy of Entropy // Tijana Stevanovic · Faculty in Withdrawal: Not To Know and the Uncertainties of Self-Institutionalization // Denisa Kera · On Prototypes: Should We Eat Mao's Pear, Sail Saint-Exupery's Boat, Drink with Heidegger's Pitcher, or Use Nietzsche's Hammer to Respond to the Crisis? // Sina Badieli · The Necessity of Education: Or How Can One Still Be an Althusserian in the Wake of Badiou? // Nick Skiadopoulos · The University Must Be Transcended // Judith Balso · Compter sur l'impossible inexistant / To Rely on the Inexistent Impossible Constitution of Happiness // Jonida Gashi · Translator's Note

Problem-Solving and Selected Topics in Number Theory

International Physics Olympiads

This book represents a comprehensive state-of-the-art picture of entrepreneurship and small business management issues in the Balkans region. It provides major theoretical and empirical evidence that offers a brighter view of these fields and aims to open up opportunities for greater dialogue in public policy. The readers would be able to enhance their knowledge

on small businesses and innovation issues in the Balkans. An outcome of a long lasting endeavour, this book includes contributions of highly reputed authors and experts from the Balkans' countries. Features forewords by two well-known personalities of this field, Leo Paul Dana and Alain Fayolle.

101 Problems in Algebra

This is a challenging problem-solving book in Euclidean geometry, assuming nothing of the reader other than a good deal of courage. Topics covered included cyclic quadrilaterals, power of a point, homothety, triangle centers; along the way the reader will meet such classical gems as the nine-point circle, the Simson line, the symmedian and the mixtilinear incircle, as well as the theorems of Euler, Ceva, Menelaus, and Pascal. Another part is dedicated to the use of complex numbers and barycentric coordinates, granting the reader both a traditional and computational viewpoint of the material. The final part consists of some more advanced topics, such as inversion in the plane, the cross ratio and projective transformations, and the theory of the complete quadrilateral. The exposition is friendly and relaxed, and accompanied by over 300 beautifully drawn figures. The emphasis of this book is placed squarely on the problems. Each chapter contains carefully chosen worked examples, which explain not only the solutions to the problems but also describe in close detail how one would invent the solution to begin with. The text contains a selection of 300 practice problems of varying difficulty from contests around the world, with extensive hints and selected solutions. This book is especially suitable for students preparing for national or international mathematical olympiads, or for teachers looking for a text for an honor class.

Entrepreneurship in the Balkans

This unique collection of new and classical problems provides full coverage of geometric inequalities. Many of the 1,000 exercises are presented with detailed author-prepared-solutions, developing creativity and an arsenal of new approaches for solving mathematical problems. This book can serve teachers, high-school students, and mathematical competitors. It may also be used as supplemental reading, providing readers with new and classical methods for proving geometric inequalities.

Introduction to Functional Equations

Bad News

Voice and Agency

Mathematical Olympiad Treasures aims at building a bridge between ordinary high school exercises and more sophisticated, intricate and abstract concepts in undergraduate mathematics. The book contains a stimulating collection of problems in the subjects of algebra, geometry, trigonometry, number theory and combinatorics. While it may be considered a sequel to "Mathematical Olympiad Challenges," the focus is on engaging a wider audience to apply techniques and strategies to real-world problems. Throughout the book students are encouraged to express their ideas, conjectures, and conclusions in writing. The goal is to help readers develop a host of new mathematical tools that will be useful beyond the classroom and in a number of disciplines.

Problem-Solving Methods in Combinatorics

The authors, who have attended the BMO several times as leaders and/or deputy leaders, present a complete description of the evolution of the BMO from its creation until the present. All problems are presented with complete solutions. Many problems have alternative solutions or extensions. A preparatory addendum, containing additional concepts and useful classical results, has been incorporated at the end of the book.

Programming Challenges

This book sets itself apart from most, if not all, the other books because it offers narrative analysis and solutions to many of the world's toughest mathematical problems used in the international and national competitions around the globe. At the time of this book's publication, solutions to many of these problems had not been found anywhere. Moreover, this book translates these seemingly the most prestigious and difficult problems into understandable terms, and thus making itself a highly valuable reference material for educational use. This book is written in a way that it would actively help a general audience learn the concepts and foundations of higher mathematics. It is a must read for many students and a useful tool for teachers around the world. It is not easy to write a mathematical book with solutions to many difficult problems, especially the ones that had not been solved for so long, because problem solving requires reasoning, the ability to formulate, represent and connect the existing mathematical theorems, lemmas, corollaries and laws to succeed, and that is why there is this book.

Geometric Inequalities

Problems and solutions from Mathematical Olympiad. Ideal for anyone interested in mathematical problem solving.

The Art and Craft of Problem Solving

Hotel Revenue Management: From Theory to Practice

“The best book ever written on human trafficking for sexual exploitation”—the basis for the feature film, *Trafficked*, starring Ashley Judd (Kevin Bales, president of Free the Slaves). Every year, hundreds of thousands of women and children are abducted, deceived, seduced, or sold into forced prostitution. These trafficked sex slaves form the backbone of one of the world’s most profitable illicit enterprises and generate huge profits for their exploiters, for unlike narcotics, which must be grown, harvested, refined, and packaged, sex slaves require no such “processing,” and can be repeatedly “consumed.” In this book, Kara provides a riveting account of his four-continent journey into this unconscionable industry, sharing the moving stories of its victims and revealing the shocking conditions of their exploitation. He draws on his background in finance, economics, and law to provide the first ever business analysis of contemporary slavery worldwide, focusing on its most profitable and barbaric form: sex trafficking. Kara describes the local factors and global economic forces that gave rise to this and other forms of modern slavery over the past two decades and quantifies, for the first time, the size, growth, and profitability of each industry. Finally, he identifies the sectors of the sex trafficking industry that would be hardest hit by specifically designed interventions and recommends the specific legal, tactical, and policy measures that would target these vulnerable sectors and help to abolish this form of slavery, once and for all. The author will donate a portion of the proceeds of this book to the anti-slavery organization, Free the Slaves. “Sex trafficking is more of a problem than most people realize. Read this well-written book and find out.”—Kirk Douglas

Beyond Balkanism

This book showcases the synthetic problem-solving methods which frequently appear in modern day Olympiad geometry, in the way we believe they should be taught to someone with little familiarity in the subject. In some sense, the text also represents an unofficial sequel to the recent problem collection published by XYZ Press, *110 Geometry Problems for the International Mathematical Olympiad*, written by the first and third authors, but the two books can be studied completely independently of each other. The work is designed as a medley of the important Lemmas in classical geometry in a relatively linear fashion: gradually starting from Power of a Point and common results to more sophisticated topics, where knowing a lot of techniques can prove to be tremendously useful. We treat each chapter as a short story of its own and include numerous solved exercises with detailed explanations and related insights that will hopefully make your journey very enjoyable.

Sex Trafficking

At a time when the world has been blindsided by failures of intelligence, a veteran CBS News correspondent reveals how the news media has betrayed our trust and endangered our democracy. Tom Fenton is the senior European correspondent for CBS News. In his long journalistic experience, he has reported on everything from the fall of the Shah of Iran to the crumbling of communism in East Germany to the bombing of Israel during the first Gulf War. Today he has covered the movements of al Qaeda throughout Europe—a story he was tracking before 9/11. And in the three years since, he has come to a sobering realization: the American news media—and network TV news in particular—has abdicated its responsibility to the American people. As Fenton points out, much of America still gets its news from the networks. But in the years leading to 9/11 the coverage of terrorism was sporadic at best, focusing on acts of terror rather than the people and movements that caused them. It was Washington's job to connect the dots, Fenton argues, but it was the news business's job to track the story and watchdog the government's vigilance—and both sides failed. "By the time of the Bush–Kerry election," Fenton writes, "for the first time, the news media had an even worse credibility gap" than the government's. Lulled into complacency by the Cold War, gutted by corporate bottom–lining bottom feeders, the news media missed the story of the century—just as they'd missed hundreds of others in the years before, from Kosovo to Chechnya. As a frequent voice in the wilderness himself—who tried unsuccessfully to interest CBS in an Osama bin Laden interview in the 1990s—Fenton charges that the news media must change its perspective from that of an entertainment–industry offshoot to that of a keeper of the public trust. And he argues that his industry must foster a new patriotic skepticism, one that will both inform the people and help Washington defend the country better. Tom Fenton's passionate argument for change in the political sector is being embraced by readers on all sides. Since its publication in the United States *Bad News* has won wide and critical acclaim from such publications as *Publisher's Weekly*, *Washington Post*, and *Christian Science Monitor*.

Euclidean Geometry in Mathematical Olympiads

This is the ultimate collection of challenging high-school-level mathematics problems. It is the result of a two year long collaboration to rescue these problems from old and scattered manuscripts, and produce the definitive source of IMO practice problems in book form for the first time. This book attempts to gather all the problems and solutions appearing on the IMO and contains a grand total of 1900 problems. It is an invaluable resource for high-school students preparing for mathematics competitions, and for anyone who loves math.

Training to Fly - Military Flight Training 1907-1945

A unique collection of competition problems from over twenty major national and international mathematical competitions

for high school students. Written for trainers and participants of contests of all levels up to the highest level, this will appeal to high school teachers conducting a mathematics club who need a range of simple to complex problems and to those instructors wishing to pose a "problem of the week", thus bringing a creative atmosphere into the classrooms. Equally, this is a must-have for individuals interested in solving difficult and challenging problems. Each chapter starts with typical examples illustrating the central concepts and is followed by a number of carefully selected problems and their solutions. Most of the solutions are complete, but some merely point to the road leading to the final solution. In addition to being a valuable resource of mathematical problems and solution strategies, this is the most complete training book on the market.

Mathematical Olympiad in China (2011-2014)

In recent years, western discourse about the Balkans, or "balkanism," has risen in prominence. Characteristically, this strand of research sidelines the academic input in the production of western representations and Balkan self-understanding. Looking at the Balkans from the vantage point of "balkanism" has therefore contributed to its further marginalization as an object of research and the evisceration of its agency. This book reverses the perspective and looks at the Balkans primarily inside-out, from within the Balkans towards its "self" and the outside world, where the west is important but not the sole referent. The book unravels attempts at regional identity-building and construction of regional discourses across various generations and academic subcultures, with the aim of reconstructing the conceptualizations of the Balkans that have emerged from academically embedded discursive practices and political usages. It thus seeks to reinstate the subjectivity of "the Balkans" and the responsibility of the Balkan intellectual elites for the concept and the images it conveys. The book then looks beyond the Balkans, inviting us to rethink the relationship between national and transnational (self-)representation and the communication between local and exogenous - Western, Central and Eastern European - concepts and definitions more generally. It thus contributes to the ongoing debates related to the creation of space and historical regions, which feed into rethinking the premises of the "new area studies." *Beyond Balkanism: The Scholarly Politics of Region Making* will interest researchers and students of transnationalism, politics, historical geography, border and area studies.

Fundamentals of Computer Programming with C#

This research monograph aims at developing an integrative framework of hotel revenue management. It elaborates the fundamental theoretical concepts in the field of hotel revenue management like the revenue management system, process, metrics, analysis, forecasting, segmentation and profiling, and ethical issues. Special attention is paid on the pricing and non-pricing revenue management tools used by hoteliers to maximise their revenues and gross operating profit. The monograph investigates the revenue management practices of accommodation establishments in Bulgaria and provides

recommendations for their improvement. The book is suitable for undergraduate and graduate students in tourism, hospitality, hotel management, services studies programmes, and researchers interested in revenue/yield management. The book may also be used by hotel general managers, marketing managers, revenue managers and other practitioners looking for ways to improve their knowledge in the field.

Mathematical Olympiad Challenges

This broad thematic study offers a major new research perspective on international migration in the context of globalisation.

105 Algebra Problems from the AwesomeMath Summer Program

This volume is the first international collection of the best physics problems (both theoretical and experimental) given at the national physics competitions for high school students in different countries. The book introduces the short history of the International Physics Olympiad, the Statutes, the Syllabus, the statistical data including complete list of winners and a collection of national reports. Each of the national report will contains — as a main part — the best theoretical and experimental problems (with complete solutions) given at the national competition or at the training of the team before the international competition. Taking into account that at present the International Physics Olympiad involves about 35 countries, we are sure that the book will be interesting for everybody involved with physics education not only with the physics olympiads.

Monopoly of Force: The Nexus of DDR and SSR

The main purpose of this book is to provide an introduction to central topics in elementary algebra from a problem-solving point of view. While working with students who were preparing for various mathematics competitions or exams, the author observed that fundamental algebraic techniques were not part of their mathematical repertoire. Since algebraic skills are not only critical to algebra itself but also to numerous other mathematical fields, a lack of such knowledge can drastically hinder a student's performance. Taking the above observations into account, the author has put together this introductory book using both simple and challenging examples which shed light upon essential algebraic strategies and techniques, as well as their application in diverse meaningful problems. This work is the first volume in a series of such books. The featured topics from elementary and classical algebra include factorizations, algebraic identities, inequalities, algebraic equations and systems of equations. More advanced concepts such as complex numbers, exponents and logarithms, as well as other topics, are generally avoided. Nevertheless, some problems are constructed using properties of complex numbers

which challenge and expose the reader to a broader spectrum of mathematics. Each chapter focuses on specific methods or strategies and provides an ample collection of accompanying problems that graduate in difficulty and complexity. In order to assist the reader with verifying mastery of the theoretical component, 105 problems are included in the last sections of the book, of which 52 are introductory and 53 are advanced. All problems come together with solutions, many employing several approaches and providing the motivation behind the solutions offered.

An Introduction to Diophantine Equations

There are many distinct pleasures associated with computer programming. Craftsmanship has its quiet rewards, the satisfaction that comes from building a useful object and making it work. Excitement arrives with the flash of insight that cracks a previously intractable problem. The spiritual quest for elegance can turn the hacker into an artist. There are pleasures in parsimony, in squeezing the last drop of performance out of clever algorithms and tight coding. The games, puzzles, and challenges of problems from international programming competitions are a great way to experience these pleasures while improving your algorithmic and coding skills. This book contains over 100 problems that have appeared in previous programming contests, along with discussions of the theory and ideas necessary to tackle them. Instant online grading for all of these problems is available from two WWW robot judging sites. Combining this book with a judge gives an exciting new way to challenge and improve your programming skills. This book can be used for self-study, for teaching innovative courses in algorithms and programming, and in training for international competition. To the Reader The problems in this book have been selected from over 1,000 programming problems at the Universidad de Valladolid online judge, available at <http://online-judge.uva.es>. The judge has ruled on well over one million submissions from 27,000 registered users around the world to date. We have taken only the best of the best, the most fun, exciting, and interesting problems available.

Beyond NATO

Appealing to everyone from college-level majors to independent learners, *The Art and Craft of Problem Solving*, 3rd Edition introduces a problem-solving approach to mathematics, as opposed to the traditional exercises approach. The goal of *The Art and Craft of Problem Solving* is to develop strong problem solving skills, which it achieves by encouraging students to do math rather than just study it. Paul Zeitz draws upon his experience as a coach for the international mathematics Olympiad to give students an enhanced sense of mathematics and the ability to investigate and solve problems.

Mathematical Olympiad Treasures

The book provides a self-contained introduction to classical Number Theory. All the proofs of the individual theorems and the solutions of the exercises are being presented step by step. Some historical remarks are also presented. The book will be directed to advanced undergraduate, beginning graduate students as well as to students who prepare for mathematical competitions (ex. Mathematical Olympiads and Putnam Mathematical competition).

On Food and Cooking

"The IMO Compendium" is the ultimate collection of challenging high-school-level mathematics problems and is an invaluable resource not only for high-school students preparing for mathematics competitions, but for anyone who loves and appreciates mathematics. The International Mathematical Olympiad (IMO), nearing its 50th anniversary, has become the most popular and prestigious competition for high-school students interested in mathematics. Only six students from each participating country are given the honor of participating in this competition every year. The IMO represents not only a great opportunity to tackle interesting and challenging mathematics problems, it also offers a way for high school students to measure up with students from the rest of the world. Until the first edition of this book appearing in 2006, it has been almost impossible to obtain a complete collection of the problems proposed at the IMO in book form. "The IMO Compendium" is the result of a collaboration between four former IMO participants from Yugoslavia, now Serbia and Montenegro, to rescue these problems from old and scattered manuscripts, and produce the ultimate source of IMO practice problems. This book attempts to gather all the problems and solutions appearing on the IMO through 2009. This second edition contains 143 new problems, picking up where the 1959-2004 edition has left off.

Pedagogies of Disaster

Functions and their properties have been part of the rigorous precollege curriculum for decades. And functional equations have been a favorite topic of the leading national and international mathematical competitions. Yet the subject has not received equal attention by authors at an introductory level. The majority of the books on the topic remain unreachable to the curious and intelligent precollege student. The present book is an attempt to eliminate this disparity. The book opens with a review chapter on functions, which collects the relevant foundational information on functions, plus some material potentially new to the reader. The next chapter presents a working definition of functional equations and explains the difficulties in trying to systematize the theory. With each new chapter, the author presents methods for the solution of a particular group of equations. Each chapter is complemented with many solved examples, the majority of which are taken from mathematical competitions and professional journals. The book ends with a chapter of unsolved problems and some other auxiliary material. The book is an invaluable resource for precollege and college students who want to deepen their knowledge of functions and their properties, for teachers and instructors who wish to enrich their curricula, and for any

lover of mathematical problem-solving techniques. In the interest of fostering a greater awareness and appreciation of mathematics and its connections to other disciplines and everyday life, MSRI and the AMS are publishing books in the Mathematical Circles Library series as a service to young people, their parents and teachers, and the mathematics profession.

Problem-Solving Strategies

Every year there is at least one combinatorics problem in each of the major international mathematical olympiads. These problems can only be solved with a very high level of wit and creativity. This book explains all the problem-solving techniques necessary to tackle these problems, with clear examples from recent contests. It also includes a large problem section for each topic, including hints and full solutions so that the reader can practice the material covered in the book. The material will be useful not only to participants in the olympiads and their coaches but also in university courses on combinatorics.

The IMO Compendium

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C# / .NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The books does not teach technologies like databases, mobile and web development, but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples.

Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>.
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License: CC-Attribution-Share-Alike Tags: free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality, high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733

Combinatorics

"Problem-Solving and Selected Topics in Euclidean Geometry: in the Spirit of the Mathematical Olympiads" contains theorems which are of particular value for the solution of geometrical problems. Emphasis is given in the discussion of a variety of methods, which play a significant role for the solution of problems in Euclidean Geometry. Before the complete solution of every problem, a key idea is presented so that the reader will be able to provide the solution. Applications of the basic geometrical methods which include analysis, synthesis, construction and proof are given. Selected problems which have been given in mathematical olympiads or proposed in short lists in IMO's are discussed. In addition, a number of problems proposed by leading mathematicians in the subject are included here. The book also contains new problems with their solutions. The scope of the publication of the present book is to teach mathematical thinking through Geometry and to provide inspiration for both students and teachers to formulate "positive" conjectures and provide solutions.

Balkan Mathematical Olympiads

Olympiad mathematics is not a collection of techniques of solving mathematical problems but a system for advancing mathematical education. This book is based on the lecture notes of the mathematical Olympiad training courses conducted

by the author in Singapore. Its scope and depth not only covers and beyond the usual syllabus, but introduces a variety of concepts and methods in modern mathematics as well. In each lecture, the concepts, theories and methods are taken as the core. The examples serve to explain and enrich their intentions and to indicate their applications. Besides, appropriate number of test questions is available for the readers' practice and testing purpose. Their detailed solutions are also conveniently provided. The examples are not very complicated so readers can easily understand. There are many real competition questions included which students can use to verify their abilities. These test questions originate from many countries all over the world. This book will serve as a useful textbook of mathematical Olympiad courses, a self-study lecture notes for students, or as a reference book for related teachers and researchers.

Mathematical Olympiads 2000-2001

Problems from the Book

Despite recent advances in important aspects of the lives of girls and women, pervasive challenges remain. These challenges reflect widespread deprivations and constraints and include epidemic levels of gender-based violence and discriminatory laws and norms that prevent women from owning property, being educated, and making meaningful decisions about their own lives--such as whether and when to marry or have children. These often violate their most basic rights and are magnified and multiplied by poverty and lack of education. This groundbreaking book distills vast data and hundreds of studies to shed new light on deprivations and constraints facing the voice and agency of women and girls worldwide, and on the associated costs for individuals, families, communities, and global development. The volume presents major new findings about the patterns of constraints and overlapping deprivations and focuses on several areas key to women's empowerment: freedom from violence, sexual and reproductive health and rights, ownership of land and housing, and voice and collective action. It highlights promising reforms and interventions from around the world and lays out an urgent agenda for governments, civil society, development agencies, and other stakeholders, including a call for greater investment in data and knowledge to benchmark progress.

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