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Plane Trigonometry 1906

Knots and Links Dale Rolfsen 2003 Rolfsen's beautiful book on knots and links can be read by anyone, from beginner to expert, who wants to learn about knot theory. Beginners find an inviting introduction to the elements of topology, emphasizing the tools needed for understanding knots, the fundamental group and van Kampen's theorem, for example, which are then applied to concrete problems, such as computing knot

groups. For experts, Rolfsen explains advanced topics, such as the connections between knot theory and surgery and how they are useful to understanding three-manifolds. Besides providing a guide to understanding knot theory, the book offers 'practical' training. After reading it, you will be able to do many things: compute presentations of knot groups, Alexander polynomials, and other invariants; perform surgery on three-manifolds; and visualize knots and their complements. It is characterized by its hands-on approach and emphasis on a visual, geometric understanding. Rolfsen offers invaluable insight and strikes a perfect balance between giving technical details and offering informal explanations. The illustrations are superb, and a wealth of examples are included. Now back in print by the AMS, the book is still a standard reference in knot theory. It is written in a remarkable style that makes it useful for both beginners and researchers. Particularly noteworthy is the table of knots and links at the end. This volume is an excellent introduction to the topic and is suitable as a textbook for a course in knot theory or 3-manifolds. Other key books of interest on this topic available from the AMS are ""The Shoelace Book: A Mathematical Guide to the Best (and Worst) Ways to Lace your Shoes"" and ""The Knot Book.""

College Algebra Gordon Fuller 1946

Making up Numbers: A History of Invention in Mathematics

Ekkehard Kopp 2020-10-23 Making up Numbers: A History of Invention in Mathematics offers a detailed but accessible account of a wide range of mathematical ideas. Starting with elementary concepts, it leads the reader towards aspects of current mathematical research. The book explains how conceptual hurdles in the development of numbers and number systems were overcome in the course of history, from Babylon to Classical Greece, from the Middle Ages to the Renaissance, and so to the nineteenth and twentieth centuries. The narrative moves from the Pythagorean insistence on positive multiples to the gradual acceptance of negative numbers, irrationals and complex numbers as essential tools in quantitative analysis. Within this chronological framework, chapters are organised thematically, covering a variety of topics and contexts: writing and solving equations, geometric construction, coordinates and complex numbers, perceptions of 'infinity' and its permissible uses in mathematics, number systems, and evolving views of the role of axioms. Through this approach, the author demonstrates that changes in our understanding of numbers have often relied on the breaking of long-held conventions to make way for new inventions at once providing greater clarity and widening mathematical horizons. Viewed from this historical perspective, mathematical abstraction emerges as neither mysterious nor immutable, but as a contingent, developing human activity. Making up Numbers will be of great interest to undergraduate and A-level students of mathematics, as well as secondary school teachers of the subject. In virtue of its detailed treatment of mathematical ideas, it will be of value to anyone seeking to learn more about the development of the subject.

The Sun, the Earth, and Near-earth Space John A. Eddy 2009 " ... Concise explanations and descriptions - easily read and readily understood - of what we know of the chain of events and processes that connect the Sun to the Earth, with special emphasis on space weather and Sun-Climate."--Dear Reader.

Analytic Geometry Gordon Fuller 1986

Motivation And Personality A H Maslow 1981-01-01 I have tried in this revision to incorporate the main lessons of the last sixteen years. These lessons have been considerable. I consider it a real and extensive revision-even though I had to do only a moderate amount of rewriting-because the main thrust of the book has been modified in important ways which I shall detail below.

Analytical Solid Geometary Shanti Narayan 2007

Weapons of Math Destruction Cathy O'Neil 2016 "A former Wall Street quantitative analyst sounds an alarm on mathematical modeling, a pervasive new force in society that threatens to undermine democracy and widen inequality,"--NoveList.

Elementary Geometry for College Students Daniel C. Alexander 1999

The Adult Learner Malcolm S. Knowles 2014-12-05 How do you tailor education to the learning needs of adults? Do they learn differently from children? How does their life experience inform their learning processes? These were the questions at the heart of Malcolm Knowles's pioneering theory of andragogy which transformed education theory in the 1970s. The resulting principles of a self-directed, experiential, problem-centered approach to learning have been hugely influential and are still the basis of the learning practices we use today. Understanding these principles is the cornerstone of increasing motivation and enabling adult learners to achieve. This eighth edition has been thoughtfully updated in terms of

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structure, content, and style. On top of this, online material and added chapter-level reflection questions make this classic text more accessible than ever. The new edition includes: Two new chapters: Neuroscience and Andragogy, and Information Technology and Learning. Updates throughout the book to reflect the very latest advancements in the field. A companion website with instructor aids for each chapter. If you are a researcher, practitioner or student in education, an adult learning practitioner, training manager, or involved in human resource development, this is the definitive book in adult learning that you should not be without.

Statistical Analysis of Measurement Error Models and Applications Philip J. Brown 1990 Measurement error models describe functional relationships among variables observed, subject to random errors of measurement. Examples include linear and nonlinear errors-in-variables regression models, calibration and inverse regression models, factor analysis models, latent structure models, and simultaneous equations models. Such models are used in a wide variety of areas, including medicine, the life sciences, econometrics, chemometrics, geology, sample surveys, and time series. Although the problem of estimating the parameters of such models exists in most scientific fields, there is a need for more sources that treat measurement error models as an area of statistical methodology. This volume is designed to address that need. This book contains the proceedings of an AMS-IMS-SIAM Joint Summer Research Conference in the Mathematical Sciences on Statistical Analysis of Measurement Error Models and Applications. The conference was held at Humboldt State University in Arcata, California in June 1989. The papers in this volume fall into four broad groups. The first group treats general aspects of the measurement problem and features a discussion of the history of measurement error models. The second group focuses on inference for the nonlinear measurement error model, an active area of research which generated considerable interest at the conference. The third group of papers examines computational aspects of estimation, while the final set studies estimators possessing robustness properties against deviations from common model assumptions.

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Discrete Mathematics for Computer Science Gary Haggard 2005

Master the fundamentals of discrete mathematics with DISCRETE MATHEMATICS FOR COMPUTER SCIENCE with Student Solutions Manual CD-ROM! An increasing number of computer scientists from diverse areas are using discrete mathematical structures to explain concepts and problems and this mathematics text shows you how to express precise ideas in clear mathematical language. Through a wealth of exercises and examples, you will learn how mastering discrete mathematics will help you develop important reasoning skills that will continue to be useful throughout your career.

The Rise of Liberal Religion Matthew Hedstrom 2013 Winner of the Frank S. and Elizabeth D. Brewer Best First Book Prize of the American Society of Church History Named a Society for U. S. Intellectual History Notable Title in American Intellectual History The story of liberal religion in the twentieth century, Matthew S. Hedstrom contends, is a story of cultural ascendancy. This may come as a surprise-most scholarship in American religious history, after all, equates the numerical decline of the Protestant mainline with the failure of religious liberalism. Yet a look beyond the pews, into the wider culture, reveals a more complex and fascinating story, one Hedstrom tells in *The Rise of Liberal Religion*. Hedstrom attends especially to the critically important yet little-studied arena of religious book culture-particularly the religious middlebrow of mid-century-as the site where religious liberalism was most effectively popularized. By looking at book weeks, book clubs, public libraries, new publishing enterprises, key authors and bestsellers, wartime reading programs, and fan mail, among other sources, Hedstrom is able to provide a rich, on-the-ground account of the men, women, and organizations that drove religious liberalism's cultural rise in the 1920s, 1930s, and 1940s. Critically, by the post-WWII period the religious middlebrow had expanded beyond its Protestant roots, using mystical and psychological spirituality as a platform for interreligious exchange. This compelling history of religion and book culture not only shows how reading and book buying were critical twentieth-century religious practices, but also provides a model for thinking about the relationship of religion to consumer culture more broadly. In this way, *The Rise of Liberal Religion* offers both innovative cultural history and new ways of seeing the imprint of liberal religion in our own times.

Structures or Why things don't fall down J. Gordon 2012-12-06 I am very much aware that it is an act of extreme rashness to attempt to write an

elementary book about structures. Indeed it is only when the subject is stripped of its mathematics that one begins to realize how difficult it is to pin down and describe those structural concepts which are often called 'elementary'; by which I suppose we mean 'basic' or 'fundamental'. Some of the omissions and oversimplifications are intentional but no doubt some of them are due to my own brute ignorance and lack of understanding of the subject. Although this volume is more or less a sequel to *The New Science of Strong Materials* it can be read as an entirely separate book in its own right. For this reason a certain amount of repetition has been unavoidable in the earlier chapters. I have to thank a great many people for factual information, suggestions and for stimulating and sometimes heated discussions. Among the living, my colleagues at Reading University have been generous with help, notably Professor W. D. Biggs (Professor of Building Technology), Dr Richard Chaplin, Dr Giorgio Jeronimidis, Dr Julian Vincent and Dr Henry Blyth; Professor Anthony Flew, Professor of Philosophy, made useful suggestions about the last chapter. I am also grateful to Mr John Bartlett, Consultant Neurosurgeon at the Brook Hospital. Professor T. P. Hughes of the University of the West Indies has been helpful about rockets and many other things besides. My secretary, Mrs Jean Collins, was a great help in times of trouble. Mrs Nethercot of Vogue was kind to me about dressmaking. Mr Gerald Leach and also many of the editorial staff of Penguins have exercised their accustomed patience and helpfulness. Among the dead, I owe a great deal to Dr Mark Pryor - lately of Trinity College, Cambridge - especially for discussions about biomechanics which extended over a period of nearly thirty years. Lastly, for reasons which must surely be obvious, I owe a humble oblation to Herodotus, once a citizen of Halicarnassus.

[The Physics of Quantum Mechanics](#) James Binney 2013-12 "First published by Cappella Archive in 2008."

The British Library General Catalogue of Printed Books 1976 to 1982 British Library 1983

Secure Coding in C and C++ Robert C. Seacord 2005-09-09 "The security of information systems has not improved at a rate consistent with the growth and sophistication of the attacks being made against them. To address this problem, we must improve the underlying strategies and techniques used to create our systems. Specifically, we must build security in from the start, rather than append it as an afterthought. That's the point of *Secure Coding in C and C++*. In careful detail, this book shows software developers how to build high-quality systems that are less vulnerable to costly and even catastrophic attack. It's a book that every developer should read before the start of any serious project." --Frank Abagnale, author, lecturer, and leading consultant on fraud prevention and secure documents *Learn the Root Causes of Software Vulnerabilities and How to Avoid Them* Commonly exploited software vulnerabilities are usually caused by avoidable software defects. Having analyzed nearly 18,000 vulnerability reports over the past ten years, the CERT/Coordination Center (CERT/CC) has determined that a relatively small number of root causes account for most of them. This book identifies and explains these causes and shows the steps that can be taken to prevent exploitation. Moreover, this book encourages programmers to adopt security best practices and develop a security mindset that can help protect software from tomorrow's attacks, not just today's. Drawing on the CERT/CC's reports and conclusions, Robert Seacord systematically identifies the program errors most likely to lead to security breaches, shows how they can be exploited, reviews the potential consequences, and presents secure alternatives. Coverage includes technical detail on how to Improve the overall security of any C/C++ application Thwart buffer overflows and stack-smashing attacks that exploit insecure string manipulation logic Avoid vulnerabilities and security flaws resulting from the incorrect use of dynamic memory management functions Eliminate integer-related problems: integer overflows, sign errors, and truncation errors Correctly use formatted output functions without introducing format-string vulnerabilities Avoid I/O vulnerabilities, including race conditions *Secure Coding in C and C++* presents hundreds of examples of secure code, insecure code, and exploits, implemented for Windows and Linux. If you're responsible for creating secure C or C++ software--or for keeping it safe--no other book offers you this much detailed, expert assistance.

Statistics for Experimenters George E. P. Box 1978-07-06 Introduces the philosophy of experimentation and the part that statistics play in experimentation. Emphasizes the need to develop a capability for "statistical thinking" by using examples drawn from actual case studies. [Solid Analytic Geometry](#) Abraham Adrian Albert 2016-07-19 Concise text covers basics of solid analytic geometry and provides ample material for

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a one-semester course. Additional chapters on spherical coordinates and projective geometry suitable for longer courses or supplementary study. 1949 edition.

Expanded Cinema Gene Youngblood 2020-03-03 Fiftieth anniversary reissue of the founding media studies book that helped establish media art as a cultural category. First published in 1970, Gene Youngblood's influential *Expanded Cinema* was the first serious treatment of video, computers, and holography as cinematic technologies. Long considered the bible for media artists, Youngblood's insider account of 1960s counterculture and the birth of cybernetics remains a mainstay reference in today's hypermediated digital world. This fiftieth anniversary edition includes a new Introduction by the author that offers conceptual tools for understanding the sociocultural and sociopolitical realities of our present world. A unique eyewitness account of burgeoning experimental film and the birth of video art in the late 1960s, this far-ranging study traces the evolution of cinematic language to the end of fiction, drama, and realism. Vast in scope, its prescient formulations include "the paleocybernetic age," "intermedia," the "artist as design scientist," the "artist as ecologist," "synaesthetics and kinesthetics," and "the technosphere: man/machine symbiosis." Outstanding works are analyzed in detail. Methods of production are meticulously described, including interviews with artists and technologists of the period, such as Nam June Paik, Jordan Belson, Andy Warhol, Stan Brakhage, Carolee Schneemann, Stan VanDerBeek, Les Levine, and Frank Gillette. An inspiring Introduction by the celebrated polymath and designer R. Buckminster Fuller—a perfectly cut gem of countercultural thinking in itself—places Youngblood's radical observations in comprehensive perspective. Providing an unparalleled historical documentation, *Expanded Cinema* clarifies a chapter of countercultural history that is still not fully represented in the arthistorical record half a century later. The book will also inspire the current generation of artists working in ever-newer expansions of the cinematic environment and will prove invaluable to all who are concerned with the technologies that are reshaping the nature of human communication.

The Topkapi Scroll Gülru Necipoğlu 1996-03-01 Since precious few architectural drawings and no theoretical treatises on architecture remain from the premodern Islamic world, the Timurid pattern scroll in the collection of the Topkapi Palace Museum Library is an exceedingly rich and valuable source of information. In the course of her in-depth analysis of this scroll dating from the late fifteenth or early sixteenth century, Gülru Necipoğlu throws new light on the conceptualization, recording, and transmission of architectural design in the Islamic world between the tenth and sixteenth centuries. Her text has particularly far-reaching implications for recent discussions on vision, subjectivity, and the semiotics of abstract representation. She also compares the Islamic understanding of geometry with that found in medieval Western art, making this book particularly valuable for all historians and critics of architecture. The scroll, with its 114 individual geometric patterns for wall surfaces and vaulting, is reproduced entirely in color in this elegant, large-format volume. An extensive catalogue includes illustrations showing the underlying geometries (in the form of incised "dead" drawings) from which the individual patterns are generated. An essay by Mohammad al-Asad discusses the geometry of the muqarnas and demonstrates by means of CAD drawings how one of the scroll's patterns could be used to design a three-dimensional vault.

Reinforcement Learning, second edition Richard S. Sutton 2018-11-13 The significantly expanded and updated new edition of a widely used text on reinforcement learning, one of the most active research areas in artificial intelligence. Reinforcement learning, one of the most active research areas in artificial intelligence, is a computational approach to learning whereby an agent tries to maximize the total amount of reward it receives while interacting with a complex, uncertain environment. In *Reinforcement Learning*, Richard Sutton and Andrew Barto provide a clear and simple account of the field's key ideas and algorithms. This second edition has been significantly expanded and updated, presenting new topics and updating coverage of other topics. Like the first edition, this second edition focuses on core online learning algorithms, with the more mathematical material set off in shaded boxes. Part I covers as much of reinforcement learning as possible without going beyond the tabular case for which exact solutions can be found. Many algorithms presented in this part are new to the second edition, including UCB, Expected Sarsa, and Double Learning. Part II extends these ideas to function approximation, with new sections on such topics as artificial neural networks and the Fourier basis, and offers expanded treatment of off-policy learning and policy-gradient methods. Part III has new

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chapters on reinforcement learning's relationships to psychology and neuroscience, as well as an updated case-studies chapter including AlphaGo and AlphaGo Zero, Atari game playing, and IBM Watson's wagering strategy. The final chapter discusses the future societal impacts of reinforcement learning.

Calculus Tom M. Apostol 2019-04-26 An introduction to the Calculus, with an excellent balance between theory and technique. Integration is treated before differentiation--this is a departure from most modern texts, but it is historically correct, and it is the best way to establish the true connection between the integral and the derivative. Proofs of all the important theorems are given, generally preceded by geometric or intuitive discussion. This Second Edition introduces the mean-value theorems and their applications earlier in the text, incorporates a treatment of linear algebra, and contains many new and easier exercises. As in the first edition, an interesting historical introduction precedes each important new concept.

Measurement Error Models Wayne A. Fuller 2009-09-25 The Wiley-Interscience Paperback Series consists of selected books that have been made more accessible to consumers in an effort to increase global appeal and general circulation. With these new unabridged softcover volumes, Wiley hopes to extend the lives of these works by making them available to future generations of statisticians, mathematicians, and scientists.

"The effort of Professor Fuller is commendable . . . [the book] provides a complete treatment of an important and frequently ignored topic. Those who work with measurement error models will find it valuable. It is the fundamental book on the subject, and statisticians will benefit from adding this book to their collection or to university or departmental libraries." -Biometrics "Given the large and diverse literature on measurement error/errors-in-variables problems, Fuller's book is most welcome. Anyone with an interest in the subject should certainly have this book." -Journal of the American Statistical Association "The author is to be commended for providing a complete presentation of a very important topic. Statisticians working with measurement error problems will benefit from adding this book to their collection." -Technometrics " . . . this book is a remarkable achievement and the product of impressive top-grade scholarly work." -Journal of Applied Econometrics

Measurement Error Models offers coverage of estimation for situations where the model variables are observed subject to measurement error. Regression models are included with errors in the variables, latent variable models, and factor models. Results from several areas of application are discussed, including recent results for nonlinear models and for models with unequal variances. The estimation of true values for the fixed model, prediction of true values under the random model, model checks, and the analysis of residuals are addressed, and in addition, procedures are illustrated with data drawn from nearly twenty real data sets.

Thinking in Systems Donella Meadows 2008-12-03 In the years following her role as the lead author of the international bestseller, *Limits to Growth*—the first book to show the consequences of unchecked growth on a finite planet—Donella Meadows remained a pioneer of environmental and social analysis until her untimely death in 2001. *Thinking in Systems*, is a concise and crucial book offering insight for problem solving on scales ranging from the personal to the global. Edited by the Sustainability Institute's Diana Wright, this essential primer brings systems thinking out of the realm of computers and equations and into the tangible world, showing readers how to develop the systems-thinking skills that thought leaders across the globe consider critical for 21st-century life. Some of the biggest problems facing the world—war, hunger, poverty, and environmental degradation—are essentially system failures. They cannot be solved by fixing one piece in isolation from the others, because even seemingly minor details have enormous power to undermine the best efforts of too-narrow thinking. While readers will learn the conceptual tools and methods of systems thinking, the heart of the book is grander than methodology. Donella Meadows was known as much for nurturing positive outcomes as she was for delving into the science behind global dilemmas. She reminds readers to pay attention to what is important, not just what is quantifiable, to stay humble, and to stay a learner. In a world growing ever more complicated, crowded, and interdependent, *Thinking in Systems* helps readers avoid confusion and helplessness, the first step toward finding proactive and effective solutions.

Introduction to Real Analysis, Fourth Edition Donald R. Sherbert 2020-09-08 Introduction to Real Analysis, Fourth Edition by Robert G. Bartle Donald R. Sherbert The first three editions were very well received and this edition maintains the same spirit and user-friendly approach as

earlier editions. Every section has been examined. Some sections have been revised, new examples and exercises have been added, and a new section on the Darboux approach to the integral has been added to Chapter 7. There is more material than can be covered in a semester and instructors will need to make selections and perhaps use certain topics as honors or extra credit projects. To provide some help for students in analyzing proofs of theorems, there is an appendix on "Logic and Proofs" that discusses topics such as implications, negations, contrapositives, and different types of proofs. However, it is a more useful experience to learn how to construct proofs by first watching and then doing than by reading about techniques of proof. Results and proofs are given at a medium level of generality. For instance, continuous functions on closed, bounded intervals are studied in detail, but the proofs can be readily adapted to a more general situation. This approach is used to advantage in Chapter 11 where topological concepts are discussed. There are a large number of examples to illustrate the concepts, and extensive lists of exercises to challenge students and to aid them in understanding the significance of the theorems. Chapter 1 has a brief summary of the notions and notations for sets and functions that will be used. A discussion of Mathematical Induction is given, since inductive proofs arise frequently. There is also a section on finite, countable and infinite sets. This chapter can be used to provide some practice in proofs, or covered quickly, or used as background material and returning later as necessary. Chapter 2 presents the properties of the real number system. The first two sections deal with Algebraic and Order properties, and the crucial Completeness Property is given in Section 2.3 as the Supremum Property. Its ramifications are discussed throughout the remainder of the chapter. In Chapter 3, a thorough treatment of sequences is given, along with the associated limit concepts. The material is of the greatest importance. Students find it rather natural although it takes time for them to become accustomed to the use of epsilon. A brief introduction to Infinite Series is given in Section 3.7, with more advanced material presented in Chapter 9 Chapter 4 on limits of functions and Chapter 5 on continuous functions constitute the heart of the book. The discussion of limits and continuity relies heavily on the use of sequences, and the closely parallel approach of these chapters reinforces the understanding of these essential topics. The fundamental properties of continuous functions on intervals are discussed in Sections 5.3 and 5.4. The notion of a gauge is introduced in Section 5.5 and used to give alternate proofs of these theorems. Monotone functions are discussed in Section 5.6. The basic theory of the derivative is given in the first part of Chapter 6. This material is standard, except a result of Caratheodory is used to give simpler proofs of the Chain Rule and the Inversion Theorem. The remainder of the chapter consists of applications of the Mean Value Theorem and may be explored as time permits. In Chapter 7, the Riemann integral is defined in Section 7.1 as a limit of Riemann sums. This has the advantage that it is consistent with the students' first exposure to the integral in calculus, and since it is not dependent on order properties, it permits immediate generalization to complex- and vector-valued functions that students may encounter in later courses. It is also consistent with the generalized Riemann integral that is discussed in Chapter 10. Sections 7.2 and 7.3 develop properties of the integral and establish the Fundamental Theorem and many more

The Mathematics of Diffusion John Crank 1979 Though it incorporates much new material, this new edition preserves the general character of the book in providing a collection of solutions of the equations of diffusion and describing how these solutions may be obtained.

College Geometry Howard Whitley Eves 1995 College Geometry is divided into two parts. Part I is a sequel to basic high school geometry and introduces the reader to some of the important modern extensions of elementary geometry- extension that have largely entered into the mainstream of mathematics. Part II treats notions of geometric structure that arose with the non-Euclidean revolution in the first half of the nineteenth century.

Foliations and the Geometry of 3-Manifolds Danny Calegari 2007-05-17 This unique reference, aimed at research topologists, gives an exposition of the 'pseudo-Anosov' theory of foliations of 3-manifolds. This theory generalizes Thurston's theory of surface automorphisms and reveals an intimate connection between dynamics, geometry and topology in 3 dimensions. Significant themes returned to throughout the text include the importance of geometry, especially the hyperbolic geometry of surfaces, the importance of monotonicity, especially in 1-dimensional and co-dimensional dynamics, and combinatorial approximation, using finite combinatorial objects such as train-tracks, branched surfaces and hierarchies to carry more complicated continuous objects.

The Shape of Inner Space Shing-Tung Yau 2010-09-07 Argues that geometry is fundamental to string theory--which posits that we live in a 10-dimensional existence--as well as the very nature of the universe, and explains where mathematics will take string theory next.

Photonic Crystals John D. Joannopoulos 2011-10-30 Since it was first published in 1995, Photonic Crystals has remained the definitive text for both undergraduates and researchers on photonic band-gap materials and their use in controlling the propagation of light. This newly expanded and revised edition covers the latest developments in the field, providing the most up-to-date, concise, and comprehensive book available on these novel materials and their applications. Starting from Maxwell's equations and Fourier analysis, the authors develop the theoretical tools of photonics using principles of linear algebra and symmetry, emphasizing analogies with traditional solid-state physics and quantum theory. They then investigate the unique phenomena that take place within photonic crystals at defect sites and surfaces, from one to three dimensions. This new edition includes entirely new chapters describing important hybrid structures that use band gaps or periodicity only in some directions: periodic waveguides, photonic-crystal slabs, and photonic-crystal fibers. The authors demonstrate how the capabilities of photonic crystals to localize light can be put to work in devices such as filters and splitters. A new appendix provides an overview of computational methods for electromagnetism. Existing chapters have been considerably updated and expanded to include many new three-dimensional photonic crystals, an extensive tutorial on device design using temporal coupled-mode theory, discussions of diffraction and refraction at crystal interfaces, and more. Richly illustrated and accessibly written, Photonic Crystals is an indispensable resource for students and researchers. Extensively revised and expanded Features improved graphics throughout Includes new chapters on photonic-crystal fibers and combined index-and band-gap-guiding Provides an introduction to coupled-mode theory as a powerful tool for device design Covers many new topics, including omnidirectional reflection, anomalous refraction and diffraction, computational photonics, and much more.

Evil Media Matthew Fuller 2012-08-17 A philosophical manual of media power for the network age. Evil Media develops a philosophy of media power that extends the concept of media beyond its tried and trusted use in the games of meaning, symbolism, and truth. It addresses the gray zones in which media exist as corporate work systems, algorithms and data structures, twenty-first century self-improvement manuals, and pharmaceutical techniques. Evil Media invites the reader to explore and understand the abstract infrastructure of the present day. From search engines to flirting strategies, from the value of institutional stupidity to the malicious minutiae of databases, this book shows how the devil is in the details. The title takes the imperative "Don't be evil" and asks, what would be done any differently in contemporary computational and networked media were that maxim reversed. Media here are about much more and much less than symbols, stories, information, or communication: media do things. They incite and provoke, twist and bend, leak and manage. In a series of provocative stratagems designed to be used, Evil Media sets its reader an ethical challenge: either remain a transparent intermediary in the networks and chains of communicative power or become oneself an active, transformative medium.

Problems on Mapping Class Groups and Related Topics Benson Farb 2006-09-12 The appearance of mapping class groups in mathematics is ubiquitous. The book presents 23 papers containing problems about mapping class groups, the moduli space of Riemann surfaces, Teichmüller geometry, and related areas. Each paper focusses completely on open problems and directions. The problems range in scope from specific computations, to broad programs. The goal is to have a rich source of problems which have been formulated explicitly and accessibly. The book is divided into four parts. Part I contains problems on the combinatorial and (co)homological group-theoretic aspects of mapping class groups, and the way in which these relate to problems in

geometry and topology. Part II concentrates on connections with classification problems in 3-manifold theory, the theory of symplectic 4-manifolds, and algebraic geometry. A wide variety of problems, from understanding billiard trajectories to the classification of Kleinian groups, can be reduced to differential and synthetic geometry problems about moduli space. Such problems and connections are discussed in Part III. Mapping class groups are related, both concretely and philosophically, to a number of other groups, such as braid groups, lattices in semisimple Lie groups, and automorphism groups of free groups. Part IV concentrates on problems surrounding these relationships. This book should be of interest to anyone studying geometry, topology, algebraic geometry or infinite groups. It is meant to provide inspiration for everyone from graduate students to senior researchers.

How to Read a Book Mortimer J. Adler 2014-09-30 Investigates the art of reading by examining each aspect of reading, problems encountered, and tells how to combat them.

Analytic Geometry Gordon Fuller 1992 Tailored for a first course in the study of analytic geometry, the text emphasizes the essential elements of the subject and stresses the concepts needed in calculus. This new edition was revised to present the subject in a modern, updated manner. Color is used to highlight concepts. Technology is integrated with the text, with references to the Calculus Explorer and tips for using graphing calculators. Several new topics, including curve fitting involving mathematical modeling were added. Exercises were updated. New and varied applications from medicine to navigation to public health were added.

The Blue Book of Grammar and Punctuation Lester Kaufman 2021-04-16 The bestselling workbook and grammar guide, revised and updated! Hailed as one of the best books around for teaching grammar, The Blue Book of Grammar and Punctuation includes easy-to-understand rules, abundant examples, dozens of reproducible quizzes, and pre- and post-tests to help teach grammar to middle and high schoolers, college students, ESL students, homeschoolers, and more. This concise, entertaining workbook makes learning English grammar and usage simple and fun. This updated 12th edition reflects the latest updates to English usage and grammar, and includes answers to all reproducible quizzes to facilitate self-assessment and learning. Clear and concise, with easy-to-follow explanations, offering "just the facts" on English grammar, punctuation, and usage Fully updated to reflect the latest rules, along with even more quizzes and pre- and post-tests to help teach grammar Ideal for students from seventh grade through adulthood in the US and abroad For anyone who wants to understand the major rules and subtle guidelines of English grammar and usage, The Blue Book of Grammar and Punctuation offers comprehensive, straightforward instruction.

Visible Learning John Hattie 2008-11-19 This unique and ground-breaking book is the result of 15 years research and synthesises over 800 meta-analyses on the influences on achievement in school-aged students. It builds a story about the power of teachers, feedback, and a model of learning and understanding. The research involves many millions of students and represents the largest ever evidence based research into what actually works in schools to improve learning. Areas covered include the influence of the student, home, school, curricula, teacher, and teaching strategies. A model of teaching and learning is developed based on the notion of visible teaching and visible learning. A major message is that what works best for students is similar to what works best for teachers - an attention to setting challenging learning intentions, being clear about what success means, and an attention to learning strategies for developing conceptual understanding about what teachers and students know and understand. Although the current evidence based fad has turned into a debate about test scores, this book is about using evidence to build and defend a model of teaching and learning. A major contribution is a fascinating benchmark/dashboard for comparing many innovations in teaching and schools.