As discrete fields of inquiry, rhetoric and mathematics have long been considered antithetical to each other. That is, if mathematics explains or describes the phenomena it studies with certainty, persuasion is not needed. This volume calls into question the view that mathematics is free of rhetoric. Through nine studies of the intersections between these two disciplines, Arguing with Numbers shows that mathematics is in fact deeply rhetorical. Using rhetoric as a lens to analyze mathematically based arguments in public policy, political and economic theory, and even literature, the essays in this volume reveal how mathematics influences the values and beliefs with which we assess the world and make decisions and how our worldviews influence the kinds of mathematical instruments we construct and accept. In addition, contributors examine how concepts of rhetoric—such as analogy and visuality—have been employed in mathematical and scientific reasoning, including in the theorems of mathematical physicists and the geometrical diagramming of
natural scientists. Challenging academic orthodoxy, these scholars reject a math-equals-truth reduction in favor of a more constructivist theory of mathematics as dynamic, evolving, and powerfully persuasive. By bringing these disparate lines of inquiry into conversation with one another, Arguing with Numbers provides inspiration to students, established scholars, and anyone inside or outside rhetorical studies who might be interested in exploring the intersections between the two disciplines. In addition to the editors, the contributors to this volume are Catherine Chaput, Crystal Broch Colombini, Nathan Crick, Michael Dreher, Jeanne Fahnestock, Andrew C. Jones, Joseph Little, and Edward Schiappa.

What is so special about the number 30? How many colors are needed to color a map? Do the prime numbers go on forever? Are there more whole numbers than even numbers? These and other mathematical puzzles are explored in this delightful book by two eminent mathematicians. Requiring no more background than plane geometry and elementary algebra, this book leads the reader into some of the most fundamental ideas of mathematics, the ideas that make the subject exciting and interesting. Explaining clearly how each problem has arisen and, in some cases, resolved, Hans Rademacher and Otto Toeplitz's deep curiosity for the subject and their outstanding pedagogical talents shine through.

Written by a distinguished University of Chicago professor, this 2nd volume in the series History of the Theory of Numbers presents material related to Diophantine Analysis. 1919 edition.

The first one-volume introduction to Plato's biography with a complete account of his works since A.E. Taylor's. It includes a systematic explanation of Plato's theory of forms and concludes with an application of Plato's ideas to the world today. Designed as an introductory text for the beginning student of philosophy or for the general reader. Originally published in 1979 by Greenwood Press.
The Oxford Handbooks series is a major new initiative in academic publishing. Each volume offers an authoritative and state-of-the-art survey of current thinking and research in a particular area. Specially commissioned essays from leading international figures in the discipline give critical examinations of the progress and direction of debates. Oxford Handbooks provide scholars and graduate students with compelling new perspectives upon a wide range of subjects in the humanities and social sciences. Plato is the best known, and continues to be the most widely studied, of all the ancient Greek philosophers. The twenty-one newly commissioned articles in the Oxford Handbook of Plato provide in-depth and up-to-date discussions of a variety of topics and dialogues. The result is a useful state-of-the-art reference to the man many consider the most important philosophical thinker in history. Each article is an original contribution from a leading scholar, and they all serve several functions at once: they survey the lay of the land; express and develop the authors' own views; and situate those views within a range of alternatives. This Handbook contains chapters on metaphysics, epistemology, love, language, ethics, politics, art and education. Individual chapters are are devoted to each of the following dialogues: the Republic, Parmenides, Theaetetus, Sophist, Timaeus, and Philebus. There are also chapters on Plato and the dialogue form; on Plato in his time and place; on the history of the Platonic corpus; on Aristotle's criticism of Plato, and on Plato and Platonism.

Wardle's commentary will stand for decades to come as a worthy modern counterpart and complement to Pease's grand opus - J. Linderski, Scholia Reviews

In this third volume of his modern introduction to quantum field theory, Eberhard Zeidler examines the mathematical and physical aspects of gauge theory as a principle tool for describing the four fundamental forces which act in the
universe: gravitative, electromagnetic, weak interaction and strong interaction. Volume III concentrates on the classical aspects of gauge theory, describing the four fundamental forces by the curvature of appropriate fiber bundles. This must be supplemented by the crucial, but elusive quantization procedure. The book is arranged in four sections, devoted to realizing the universal principle force equals curvature: Part I: The Euclidean Manifold as a Paradigm Part II: Ariadne's Thread in Gauge Theory Part III: Einstein's Theory of Special Relativity Part IV: Ariadne's Thread in Cohomology For students of mathematics the book is designed to demonstrate that detailed knowledge of the physical background helps to reveal interesting interrelationships among diverse mathematical topics. Physics students will be exposed to a fairly advanced mathematics, beyond the level covered in the typical physics curriculum. Quantum Field Theory builds a bridge between mathematicians and physicists, based on challenging questions about the fundamental forces in the universe (macrocosmos), and in the world of elementary particles (microcosmos).

Prefaced by a history of ancient Greek astronomy, this 1913 edition of Aristarchus' only surviving treatise includes a facing-page translation.

First published in 2003. Routledge is an imprint of Taylor & Francis, an informa company.

By combining algebraic and graphical approaches with practical business and personal finance applications, South-Western's FINANCIAL ALGEBRA, motivates high school students to explore algebraic thinking patterns and functions in a financial context. FINANCIAL ALGEBRA will help your students achieve success by offering an applications based learning approach incorporating Algebra I, Algebra II, and Geometry topics. Authors Gerver and Sgroi have spent more than 25 years working with students of all ability levels and they have found the most success when connecting math to the real world. FINANCIAL ALGEBRA encourages students to be actively involved in applying mathematical ideas to their everyday lives. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.
This is a cultural history of mathematics and art, from antiquity to the present. Mathematicians and artists have long been on a quest to understand the physical world they see before them and the abstract objects they know by thought alone. Taking readers on a tour of the practice of mathematics and the philosophical ideas that drive the discipline, Lynn Gamwell points out the important ways mathematical concepts have been expressed by artists. Sumptuous illustrations of artworks and cogent math diagrams are featured in Gamwell’s comprehensive exploration. Gamwell begins by describing mathematics from antiquity to the Enlightenment, including Greek, Islamic, and Asian mathematics. Then focusing on modern culture, Gamwell traces mathematicians’ search for the foundations of their science, such as David Hilbert’s conception of mathematics as an arrangement of meaning-free signs, as well as artists’ search for the essence of their craft, such as Aleksandr Rodchenko’s monochrome paintings. She shows that self-reflection is inherent to the practice of both modern mathematics and art, and that this introspection points to a deep resonance between the two fields: Kurt Gödel posed questions about the nature of mathematics in the language of mathematics and Jasper Johns asked “What is art?” in the vocabulary of art. Throughout, Gamwell describes the personalities and cultural environments of a multitude of mathematicians and artists, from Gottlob Frege and Benoît Mandelbrot to Max Bill and Xu Bing. Mathematics and Art demonstrates how mathematical ideas are embodied in the visual arts and will enlighten all who are interested in the complex intellectual pursuits, personalities, and cultural settings that connect these vast disciplines.

Plato's Ghost is the first book to examine the development of mathematics from 1880 to 1920 as a modernist transformation similar to those in art, literature, and music. Jeremy Gray traces the growth of mathematical modernism from its roots in problem solving and theory to its interactions with physics, philosophy, theology, psychology, and ideas about real and artificial languages. He shows how mathematics was popularized, and explains how mathematical modernism not only gave expression to the work of mathematicians and the professional image they sought to create for themselves, but how modernism also introduced deeper and ultimately unanswerable questions. Plato's Ghost evokes Yeats's lament that any claim to worldly perfection
inevitably is proven wrong by the philosopher's ghost; Gray demonstrates how modernist mathematicians believed they had advanced further than anyone before them, only to make more profound mistakes. He tells for the first time the story of these ambitious and brilliant mathematicians, including Richard Dedekind, Henri Lebesgue, Henri Poincaré, and many others. He describes the lively debates surrounding novel objects, definitions, and proofs in mathematics arising from the use of naïve set theory and the revived axiomatic method—debates that spilled over into contemporary arguments in philosophy and the sciences and drove an upsurge of popular writing on mathematics. And he looks at mathematics after World War I, including the foundational crisis and mathematical Platonism. Plato's Ghost is essential reading for mathematicians and historians, and will appeal to anyone interested in the development of modern mathematics.

In the two Books of De divinatione Cicero considers beliefs concerning fate and the possibility of prediction: in the first book he puts the (principally Stoic) case for them in the mouth of his brother Quintus; in the second, speaking in his own person, he argues against them. In this new translation of, and commentary on, Book One—the first in English for over 80 years—David Wardle guides the reader through the course of Cicero's argument, giving particular attention to the traditional Roman and the philosophical conception of divination.

Algebra as a hands-on subject? With this helpful resource, you can simplify equations using pennies and nickels, use aluminum foil to multiply polynomials (the FOIL method), create coordinate graphs with candy, examine exponential decay functions with a bouncy ball, and much more. Junk Drawer Algebra proves that you don't need high-tech equipment to comprehend math concepts—just what you can find around the house or in your recycling bin. Each of this book's fifty creative algebra projects includes a materials list and detailed, step-by-step instructions with illustrations. The projects also include ideas on how to modify the lessons for different age and skill levels, allowing anyone teaching children to use this to excite students. Educators and parents will find this title a handy guide to teach problem-solving skills and algebraic
equations, all while having a lot of fun.

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also celebrates people, companies, and projects.

A weekly review of politics, literature, theology, and art.

This advanced text is the first book to describe the subject of classical mechanics in the context of the language and methods of modern nonlinear dynamics. The organizing principle of the text is integrability vs. nonintegrability.

In ancient tradition, Pythagoras emerges as a wise teacher, an outstanding mathematician, an influential politician, and as a religious and ethical reformer. This volume offers a comprehensive study of Pythagoras, Pythagoreanism, and the early Pythagoreans through an analysis of the many representations of the individual and his followers.

Presents concise definitions, pronunciations, abbreviations, some illustrations, usage examples, and synonyms with ten thousand new words and meanings.

Drawing upon experiences at state and local level project evaluation, and based on current research in the professional literature, Payne presents a practical, systematic, and flexible approach to educational evaluations. Evaluators at all levels -- state, local and classroom -- will find ideas useful in conducting, managing, and using evaluations. Special user targets identified are state department of education personnel and local school system administrative personnel. The volume can be used by those doing evaluation projects `in the field', or as a text for graduate courses at an introductory level. The book begins with an overview of the generic evaluation process. Chapter Two is devoted to the criteria for judging the effectiveness of evaluation practice. Chapter Three addresses the all important topic of evaluation goals and objectives. Chapters Four, Five and Six basically are concerned with the approach, framework, or design of an evaluation study. Chapter Four contains a discussion of four major philosophical frameworks or metaphors and the implications of these frameworks for conducting an evaluation. Chapters Five and Six describe predominantly
quantitative and qualitative designs, respectively. Design, implementation and operational issues related to instrumentation (Chapter Seven), management and decision making (Chapter Eight), and reporting and utilization of results (Chapter Nine) are next addressed. The final chapter of the book (Chapter Ten) considers the evaluation of educational products and materials.

Beginning with the origins of Western philosophy, the profound creation of the Hellenic genius, Reale presents an appreciation of the Naturalists, the Sophists, Socrates, and the Minor Socratics. Special attention is paid to the Eleatics because their problems decisively mark Platonic and Aristotelian philosophy. Interpretation of the Sophists benefits from the recent reevaluation of their thought. Socrates himself would be inconceivable without the Sophists since he is one of them. Socrates is given major prominence. Plato, Aristotle, and all of Hellenistic philosophy are deeply impregnated with his words and spirit. The teachings of the Minor Socratics are interpreted as one-sided reductions of the pluralistic values of Socratic thought and as anticipations of some issues that explode later in the Hellenistic Age. There are two appendices. The first concerns Orphism and contains a series of documents indispensable for the comprehension of some aspects of pre-Socratic and Platonic thought. The second explains the key to understanding the message of the Greeks--the message of "theorein".

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