

A First Course In Complex Analysis With Applications Solution Manual

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[A Course in Complex Analysis and Riemann Surfaces](#) - Wilhelm Schlag 2014-08-06

Complex analysis is a cornerstone of mathematics, making it an essential element of any area of study in graduate mathematics. Schlag's treatment of the subject emphasizes the intuitive geometric underpinnings of elementary complex analysis that naturally lead to the theory of Riemann surfaces. The book begins with an exposition of the basic theory of holomorphic functions of one complex variable. The first two chapters constitute a fairly rapid, but comprehensive course in complex analysis. The third chapter is devoted to the study of harmonic functions on the disk and the half-plane, with an emphasis on the Dirichlet problem. Starting with the fourth chapter, the theory of Riemann surfaces is developed in some detail and with complete rigor. From the beginning, the geometric aspects are emphasized and classical topics such as elliptic functions and elliptic integrals are presented as illustrations of the abstract theory. The special role of compact Riemann surfaces is explained, and their connection with algebraic equations is established. The book concludes with three chapters devoted to three major results: the Hodge decomposition theorem, the Riemann-Roch theorem, and the uniformization theorem. These chapters present the core technical apparatus of Riemann surface theory at this level. This text is intended as a detailed, yet fast-paced intermediate introduction to those parts of the theory of one complex variable that seem most useful in other areas of mathematics, including geometric group theory, dynamics, algebraic geometry, number theory, and functional analysis. More than seventy figures serve to illustrate concepts and ideas, and the many problems at the end of each chapter give the reader ample opportunity for practice and independent study.

Guide to Cultivating Complex Analysis - Jiri Lebl 2020-09-16

An introductory course in complex analysis for incoming graduate students. Created to teach Math 5283 at Oklahoma State University. The book has somewhat more material than could fit in a one-semester course, allowing some choices. There are also appendices on metric spaces and some basic analysis background to make for a longer and more complete course for those that have only had an introduction to basic analysis on the real line.

Complex Analysis - Eberhard Freitag 2006-01-17

All needed notions are developed within the book: with the exception of fundamentals which are presented in introductory lectures, no other knowledge is assumed Provides a more in-depth introduction to the subject than other existing books in this area Over 400 exercises including hints for solutions are included

A First Course on Complex Functions - G. Jameson 2013-03-09

This book contains a rigorous coverage of those topics (and only those topics) that, in the author's judgement, are suitable for inclusion in a first course on Complex Functions. Roughly speaking, these can be summarized as being the things that can be done with Cauchy's integral formula and the residue theorem. On the theoretical side, this includes the basic core of the theory of differentiable complex functions, a theory which is unsurpassed in Mathematics for its cohesion, elegance and wealth of surprises. On the practical side, it includes the computational applications of the residue theorem. Some prominence is given to the latter, because for the more sceptical student they provide the justification for inventing the complex numbers. Analytic continuation and Riemann surfaces form an essentially different chapter of Complex Analysis. A proper treatment is far too sophisticated for a first course, and they are therefore excluded. The aim has been to produce the simplest possible rigorous treatment of the topics discussed. For

the programme outlined above, it is quite sufficient to prove Cauchy's integral theorem for paths in star-shaped open sets, so this is done. No form of the Jordan curve theorem is used anywhere in the book.

Introductory Complex Analysis - Richard A. Silverman 1984-05-01

A shorter version of A. I. Markushevich's masterly three-volume Theory of Functions of a Complex Variable, this edition is appropriate for advanced undergraduate and graduate courses in complex analysis.

Numerous worked-out examples and more than 300 problems, some with hints and answers, make it suitable for independent study. 1967 edition.

An Introduction to Complex Analysis - O. Carruth McGehee 2000-09-15

Recent decades have seen profound changes in the way we understand complex analysis. This new work presents a much-needed modern treatment of the subject, incorporating the latest developments and providing a rigorous yet accessible introduction to the concepts and proofs of this fundamental branch of mathematics. With its thorough review of the prerequisites and well-balanced mix of theory and practice, this book will appeal both to readers interested in pursuing advanced topics as well as those wishing to explore the many applications of complex analysis to engineering and the physical sciences. * Reviews the necessary calculus, bringing readers quickly up to speed on the material * Illustrates the theory, techniques, and reasoning through the use of short proofs and many examples * Demystifies complex versus real differentiability for functions from the plane to the plane * Develops Cauchy's Theorem, presenting the powerful and easy-to-use winding-number version * Contains over 100 sophisticated graphics to provide helpful examples and reinforce important concepts

Visual Complex Analysis - Tristan Needham 1997

This radical approach to complex analysis replaces the standard calculational arguments with new geometric ones. Using several hundred diagrams this is a new visual approach to the topic.

A First Course in Complex Analysis with Applications - Dennis Zill 2009

The new Second Edition of A First Course in Complex Analysis with Applications is a truly accessible introduction to the fundamental principles and applications of complex analysis. Designed for the undergraduate student with a calculus background but no prior experience with complex variables, this text discusses theory of the most relevant mathematical topics in a student-friendly manor. With Zill's clear and straightforward writing style, concepts are introduced through numerous examples and clear illustrations. Students are guided and supported through numerous proofs providing them with a higher level of mathematical insight and maturity. Each chapter contains a separate section on the applications of complex variables, providing students with the opportunity to develop a practical and clear understanding of complex analysis.

A Friendly Approach to Complex Analysis - Sara Maad Sasane 2013-12-24

The book constitutes a basic, concise, yet rigorous course in complex analysis, for students who have studied calculus in one and several variables, but have not previously been exposed to complex analysis. The textbook should be particularly useful and relevant for undergraduate students in joint programmes with mathematics, as well as engineering students. The aim of the book is to cover the bare bones of the subject with minimal prerequisites. The core content of the book is the three main pillars of complex analysis: the Cauchy-Riemann equations, the Cauchy Integral Theorem, and Taylor and Laurent series expansions. Each section contains several problems, which are not purely drill exercises, but are rather

meant to reinforce the fundamental concepts. Detailed solutions to all the exercises appear at the end of the book, making the book ideal also for self-study. There are many figures illustrating the text. Errata(s) Errata (72 KB)

Complex Analysis - Jerry R. Muir, Jr. 2015-05-04

A thorough introduction to the theory of complex functions emphasizing the beauty, power, and counterintuitive nature of the subject. Written with a reader-friendly approach, *Complex Analysis: A Modern First Course in Function Theory* features a self-contained, concise development of the fundamental principles of complex analysis. After laying groundwork on complex numbers and the calculus and geometric mapping properties of functions of a complex variable, the author uses power series as a unifying theme to define and study the many rich and occasionally surprising properties of analytic functions, including the Cauchy theory and residue theorem. The book concludes with a treatment of harmonic functions and an epilogue on the Riemann mapping theorem. Thoroughly classroom tested at multiple universities, *Complex Analysis: A Modern First Course in Function Theory* features: Plentiful exercises, both computational and theoretical, of varying levels of difficulty, including several that could be used for student projects. Numerous figures to illustrate geometric concepts and constructions used in proofs. Remarks at the conclusion of each section that place the main concepts in context, compare and contrast results with the calculus of real functions, and provide historical notes. Appendices on the basics of sets and functions and a handful of useful results from advanced calculus. Appropriate for students majoring in pure or applied mathematics as well as physics or engineering, *Complex Analysis: A Modern First Course in Function Theory* is an ideal textbook for a one-semester course in complex analysis for those with a strong foundation in multivariable calculus. The logically complete book also serves as a key reference for mathematicians, physicists, and engineers and is an excellent source for anyone interested in independently learning or reviewing the beautiful subject of complex analysis.

A Complex Analysis Problem Book - Daniel Alpay 2016-10-26

This second edition presents a collection of exercises on the theory of analytic functions, including completed and detailed solutions. It introduces students to various applications and aspects of the theory of analytic functions not always touched on in a first course, while also addressing topics of interest to electrical engineering students (e.g., the realization of rational functions and its connections to the theory of linear systems and state space representations of such systems). It provides examples of important Hilbert spaces of analytic functions (in particular the Hardy space and the Fock space), and also includes a section reviewing essential aspects of topology, functional analysis and Lebesgue integration. Benefits of the 2nd edition: Rational functions are now covered in a separate chapter. Further, the section on conformal mappings has been expanded.

A First Course in Complex Analysis - Matthias Beck 2018-09

A First Course in Complex Analysis was developed from lecture notes for a one-semester undergraduate course taught by the authors. For many students, complex analysis is the first rigorous analysis (if not mathematics) class they take, and these notes reflect this. The authors try to rely on as few concepts from real analysis as possible. In particular, series and sequences are treated from scratch.

Twenty-One Lectures on Complex Analysis - Alexander Isaev 2017-12-07

At its core, this concise textbook presents standard material for a first course in complex analysis at the advanced undergraduate level. This distinctive text will prove most rewarding for students who have a genuine passion for mathematics as well as certain mathematical maturity. Primarily aimed at undergraduates with working knowledge of real analysis and metric spaces, this book can also be used to instruct a graduate course. The text uses a conversational style with topics purposefully apportioned into 21 lectures, providing a suitable format for either independent study or lecture-based teaching. Instructors are invited to rearrange the order of topics according to their own vision. A clear and rigorous exposition is supported by engaging examples and exercises unique to each lecture; a large number of exercises contain useful calculation problems. Hints are given for a selection of the more difficult exercises. This text furnishes the reader with a means of learning complex analysis as well as a subtle introduction to careful mathematical reasoning. To guarantee a student's progression, more advanced topics are spread out over several lectures. This text is based on a one-semester (12 week) undergraduate course in complex analysis

that the author has taught at the Australian National University for over twenty years. Most of the principal facts are deduced from Cauchy's Independence of Homotopy Theorem allowing us to obtain a clean derivation of Cauchy's Integral Theorem and Cauchy's Integral Formula. Setting the tone for the entire book, the material begins with a proof of the Fundamental Theorem of Algebra to demonstrate the power of complex numbers and concludes with a proof of another major milestone, the Riemann Mapping Theorem, which is rarely part of a one-semester undergraduate course.

A Book of Abstract Algebra - Charles C Pinter 2010-01-14

Accessible but rigorous, this outstanding text encompasses all of the topics covered by a typical course in elementary abstract algebra. Its easy-to-read treatment offers an intuitive approach, featuring informal discussions followed by thematically arranged exercises. This second edition features additional exercises to improve student familiarity with applications. 1990 edition.

Complex Analysis - Theodore W. Gamelin 2013-11-01

An introduction to complex analysis for students with some knowledge of complex numbers from high school. It contains sixteen chapters, the first eleven of which are aimed at an upper division undergraduate audience. The remaining five chapters are designed to complete the coverage of all background necessary for passing PhD qualifying exams in complex analysis. Topics studied include Julia sets and the Mandelbrot set, Dirichlet series and the prime number theorem, and the uniformization theorem for Riemann surfaces, with emphasis placed on the three geometries: spherical, euclidean, and hyperbolic. Throughout, exercises range from the very simple to the challenging. The book is based on lectures given by the author at several universities, including UCLA, Brown University, La Plata, Buenos Aires, and the Universidad Autonoma de Valencia, Spain.

Introduction to Complex Analysis - Hilary A. Priestley 2003

This second edition of Priestley's well-known text is aimed at students taking an introductory core course in Complex Analysis, a classical and central area of mathematics.

Complex Analysis - John M. Howie 2012-12-06

Complex analysis can be a difficult subject and many introductory texts are just too ambitious for today's students. This book takes a lower starting point than is traditional and concentrates on explaining the key ideas through worked examples and informal explanations, rather than through "dry" theory.

Elementary Theory of Analytic Functions of One or Several Complex Variables - Henri Cartan 2013-04-22

Basic treatment includes existence theorem for solutions of differential systems where data is analytic, holomorphic functions, Cauchy's integral, Taylor and Laurent expansions, more. Exercises. 1973 edition.

Complex Analysis - Serge Lang 2013-06-29

The present book is meant as a text for a course on complex analysis at the advanced undergraduate level, or first-year graduate level. Somewhat more material has been included than can be covered at leisure in one term, to give opportunities for the instructor to exercise his taste, and lead the course in whatever direction strikes his fancy at the time. A large number of routine exercises are included for the more standard portions, and a few harder exercises of striking theoretical interest are also included, but may be omitted in courses addressed to less advanced students. In some sense, I think the classical German prewar texts were the best (Hurwitz-Courant, Knopp, Bieberbach, etc.) and I would recommend to anyone to look through them. More recent texts have emphasized connections with real analysis, which is important, but at the cost of exhibiting succinctly and clearly what is peculiar about complex analysis: the power series expansion, the uniqueness of analytic continuation, and the calculus of residues. The systematic elementary development of formal and convergent power series was standard fare in the German texts, but only Cartan, in the more recent books, includes this material, which I think is quite essential, e. g. , for differential equations. I have written a short text, exhibiting these features, making it applicable to a wide variety of tastes. The book essentially decomposes into two parts.

A First Course in Analysis - John B. Conway 2018

This concise text clearly presents the material needed for year-long analysis courses for advanced undergraduates or beginning graduates.

A First Course in Complex Analysis with Applications - Dennis G. Zill 2006-07

A First Course In Complex Analysis With Applications Limits Theoretical Coverage To Only What Is

Necessary, And Conveys It In A Student-Friendly Style. Its Aim Is To Introduce The Basic Principles And Applications Of Complex Analysis To Undergraduates Who Have No Prior Knowledge Of This Subject. Contents Of The Book Include The Complex Number System, Complex Functions And Sequences, As Well As Real Integrals; In Addition To Other Concepts Of Calculus, And The Functions Of A Complex Variable. This Text Is Written For Junior-Level Undergraduate Students Who Are Majoring In Math, Physics, Computer Science, And Electrical Engineering.

Complex Analysis with Applications - Nakhlé H. Asmar 2018-10-12

This textbook is intended for a one semester course in complex analysis for upper level undergraduates in mathematics. Applications, primary motivations for this text, are presented hand-in-hand with theory enabling this text to serve well in courses for students in engineering or applied sciences. The overall aim in designing this text is to accommodate students of different mathematical backgrounds and to achieve a balance between presentations of rigorous mathematical proofs and applications. The text is adapted to enable maximum flexibility to instructors and to students who may also choose to progress through the material outside of coursework. Detailed examples may be covered in one course, giving the instructor the option to choose those that are best suited for discussion. Examples showcase a variety of problems with completely worked out solutions, assisting students in working through the exercises. The numerous exercises vary in difficulty from simple applications of formulas to more advanced project-type problems. Detailed hints accompany the more challenging problems. Multi-part exercises may be assigned to individual students, to groups as projects, or serve as further illustrations for the instructor. Widely used graphics clarify both concrete and abstract concepts, helping students visualize the proofs of many results. Freely accessible solutions to every-other-odd exercise are posted to the book's Springer website.

Additional solutions for instructors' use may be obtained by contacting the authors directly.

Invitation to Complex Analysis - Ralph Philip Boas 1987

Ideal for a first course in complex analysis, this book can be used either as a classroom text or for independent study. Written at a level accessible to advanced undergraduates and beginning graduate students, the book is suitable for readers acquainted with advanced calculus or introductory real analysis. The treatment goes beyond the standard material of power series, Cauchy's theorem, residues, conformal mapping, and harmonic functions by including accessible discussions of intriguing topics that are uncommon in a book at this level. The flexibility afforded by the supplementary topics and applications makes the book adaptable either to a short, one-term course or to a comprehensive, full-year course. Detailed solutions of the exercises both serve as models for students and facilitate independent study. Supplementary exercises, not solved in the book, provide an additional teaching tool.

Complex Analysis - Elias M. Stein 2010-04-22

With this second volume, we enter the intriguing world of complex analysis. From the first theorems on, the elegance and sweep of the results is evident. The starting point is the simple idea of extending a function initially given for real values of the argument to one that is defined when the argument is complex. From there, one proceeds to the main properties of holomorphic functions, whose proofs are generally short and quite illuminating: the Cauchy theorems, residues, analytic continuation, the argument principle. With this background, the reader is ready to learn a wealth of additional material connecting the subject with other areas of mathematics: the Fourier transform treated by contour integration, the zeta function and the prime number theorem, and an introduction to elliptic functions culminating in their application to combinatorics and number theory. Thoroughly developing a subject with many ramifications, while striking a careful balance between conceptual insights and the technical underpinnings of rigorous analysis, *Complex Analysis* will be welcomed by students of mathematics, physics, engineering and other sciences. The Princeton Lectures in Analysis represents a sustained effort to introduce the core areas of mathematical analysis while also illustrating the organic unity between them. Numerous examples and applications throughout its four planned volumes, of which *Complex Analysis* is the second, highlight the far-reaching consequences of certain ideas in analysis to other fields of mathematics and a variety of sciences. Stein and Shakarchi move from an introduction addressing Fourier series and integrals to in-depth considerations of complex analysis; measure and integration theory, and Hilbert spaces; and, finally, further topics such as functional analysis, distributions and elements of probability theory.

Complex Analysis in one Variable - NARASIMHAN 2012-12-06

This book is based on a first-year graduate course I gave three times at the University of Chicago. As it was addressed to graduate students who intended to specialize in mathematics, I tried to put the classical theory of functions of a complex variable in context, presenting proofs and points of view which relate the subject to other branches of mathematics. Complex analysis in one variable is ideally suited to this attempt. Of course, the branches of mathematics one chooses, and the connections one makes, must depend on personal taste and knowledge. My own leaning towards several complex variables will be apparent, especially in the notes at the end of the different chapters. The first three chapters deal largely with classical material which is available in the many books on the subject. I have tried to present this material as efficiently as I could, and, even here, to show the relationship with other branches of mathematics. Chapter 4 contains a proof of Picard's theorem; the method of proof I have chosen has far-reaching generalizations in several complex variables and in differential geometry. The next two chapters deal with the Runge approximation theorem and its many applications. The presentation here has been strongly influenced by work on several complex variables.

Complex Analysis - Donald E. Marshall 2019-03-07

This user-friendly textbook follows Weierstrass' approach to offer a self-contained introduction to complex analysis.

A Collection of Problems on Complex Analysis - Lev Izrailevich Volkovyski? 1991-01-01

Over 1500 problems on theory of functions of the complex variable; coverage of nearly every branch of classical function theory. Topics include conformal mappings, integrals and power series, Laurent series, parametric integrals, integrals of the Cauchy type, analytic continuation, Riemann surfaces, much more. Answers and solutions at end of text. Bibliographical references. 1965 edition.

Complex Analysis - Dennis G. Zill 2013-09-16

Revision of: *A first course in complex analysis with applications*. -- 2nd ed. -- 2009.

Complex Analysis - Jerry R. Muir, Jr. 2015-05-26

A thorough introduction to the theory of complex functions emphasizing the beauty, power, and counterintuitive nature of the subject. Written with a reader-friendly approach, *Complex Analysis: A Modern First Course in Function Theory* features a self-contained, concise development of the fundamental principles of complex analysis. After laying groundwork on complex numbers and the calculus and geometric mapping properties of functions of a complex variable, the author uses power series as a unifying theme to define and study the many rich and occasionally surprising properties of analytic functions, including the Cauchy theory and residue theorem. The book concludes with a treatment of harmonic functions and an epilogue on the Riemann mapping theorem. Thoroughly classroom tested at multiple universities, *Complex Analysis: A Modern First Course in Function Theory* features: Plentiful exercises, both computational and theoretical, of varying levels of difficulty, including several that could be used for student projects. Numerous figures to illustrate geometric concepts and constructions used in proofs. Remarks at the conclusion of each section that place the main concepts in context, compare and contrast results with the calculus of real functions, and provide historical notes. Appendices on the basics of sets and functions and a handful of useful results from advanced calculus. Appropriate for students majoring in pure or applied mathematics as well as physics or engineering, *Complex Analysis: A Modern First Course in Function Theory* is an ideal textbook for a one-semester course in complex analysis for those with a strong foundation in multivariable calculus. The logically complete book also serves as a key reference for mathematicians, physicists, and engineers and is an excellent source for anyone interested in independently learning or reviewing the beautiful subject of complex analysis.

An Introduction to Complex Analysis - Ravi P. Agarwal 2011-07-01

This textbook introduces the subject of complex analysis to advanced undergraduate and graduate students in a clear and concise manner. Key features of this textbook: effectively organizes the subject into easily manageable sections in the form of 50 class-tested lectures, uses detailed examples to drive the presentation, includes numerous exercise sets that encourage pursuing extensions of the material, each with an "Answers or Hints" section, covers an array of advanced topics which allow for flexibility in developing the subject beyond the basics, provides a concise history of complex numbers. An Introduction

to Complex Analysis will be valuable to students in mathematics, engineering and other applied sciences. Prerequisites include a course in calculus.

A Course in Complex Analysis - Saeed Zakeri 2021-11-02

"This textbook is intended for a year-long graduate course on complex analysis, a branch of mathematical analysis that has broad applications, particularly in physics, engineering, and applied mathematics. Based on nearly twenty years of classroom lectures, the book is accessible enough for independent study, while the rigorous approach will appeal to more experienced readers and scholars, propelling further research in this field. While other graduate-level complex analysis textbooks do exist, Zakeri takes a distinctive approach by highlighting the geometric properties and topological underpinnings of this area. Zakeri includes more than three hundred and fifty problems, with problem sets at the end of each chapter, along with additional solved examples. Background knowledge of undergraduate analysis and topology is needed, but the thoughtful examples are accessible to beginning graduate students and advanced undergraduates. At the same time, the book has sufficient depth for advanced readers to enhance their own research. The textbook is well-written, clearly illustrated, and peppered with historical information, making it approachable without sacrificing rigor. It is poised to be a valuable textbook for graduate students, filling a needed gap by way of its level and unique approach"--

Real Analysis - Jay Cummings 2019-07-15

This textbook is designed for students. Rather than the typical definition-theorem-proof-repeat style, this text includes much more commentary, motivation and explanation. The proofs are not terse, and aim for understanding over economy. Furthermore, dozens of proofs are preceded by "scratch work" or a proof sketch to give students a big-picture view and an explanation of how they would come up with it on their own. Examples often drive the narrative and challenge the intuition of the reader. The text also aims to make the ideas visible, and contains over 200 illustrations. The writing is relaxed and includes interesting historical notes, periodic attempts at humor, and occasional diversions into other interesting areas of mathematics. The text covers the real numbers, cardinality, sequences, series, the topology of the reals, continuity, differentiation, integration, and sequences and series of functions. Each chapter ends with exercises, and nearly all include some open questions. The first appendix contains a construction the reals, and the second is a collection of additional peculiar and pathological examples from analysis. The author believes most textbooks are extremely overpriced and endeavors to help change this. Hints and solutions to select exercises can be found at LongFormMath.com.

Complex Analysis - Friedrich Haslinger 2017-11-20

In this textbook, a concise approach to complex analysis of one and several variables is presented. After an introduction of Cauchy's integral theorem general versions of Runge's approximation theorem and Mittag-Leffler's theorem are discussed. The first part ends with an analytic characterization of simply connected domains. The second part is concerned with functional analytic methods: Fréchet and Hilbert spaces of holomorphic functions, the Bergman kernel, and unbounded operators on Hilbert spaces to tackle the theory of several variables, in particular the inhomogeneous Cauchy-Riemann equations and the $\bar{\partial}$ -Neumann operator. Contents Complex numbers and functions Cauchy's Theorem and Cauchy's formula Analytic continuation Construction and approximation of holomorphic functions Harmonic functions Several complex variables Bergman spaces The canonical solution operator to Nuclear Fréchet spaces of

holomorphic functions The $\bar{\partial}$ -complex The twisted $\bar{\partial}$ -complex and Schrödinger operators

Student Study Guide to Accompany A First Course in Complex Analysis with Applications - Dennis G. Zill 2009-09-29

The Student Study Guide consists of seven chapters which correspond to the seven chapters of A First Course in Complex Analysis with Applications, Second Edition. Each chapter includes: Review Topics, Summaries, Exercises, and Focus on Concepts Problems. Solutions to odd exercises are included.

Elementary Real and Complex Analysis - Georgi E. Shilov 2012-07-31

DIVExcellent undergraduate-level text offers coverage of real numbers, sets, metric spaces, limits, continuous functions, much more. Each chapter contains a problem set with hints and answers. 1973 edition. /div

FIRST COURSE IN COMPLEX ANALYSIS - ALLAN R. WILLMS 2022

Complex Analysis - Dennis G. Zill 2013-09-20

Designed for the undergraduate student with a calculus background but no prior experience with complex analysis, this text discusses the theory of the most relevant mathematical topics in a student-friendly manner. With a clear and straightforward writing style, concepts are introduced through numerous examples, illustrations, and applications. Each section of the text contains an extensive exercise set containing a range of computational, conceptual, and geometric problems. In the text and exercises, students are guided and supported through numerous proofs providing them with a higher level of mathematical insight and maturity. Each chapter contains a separate section devoted exclusively to the applications of complex analysis to science and engineering, providing students with the opportunity to develop a practical and clear understanding of complex analysis. The Mathematica syntax from the second edition has been updated to coincide with version 8 of the software. --

A Course In Complex Analysis In One Variable - Moskowitz Martin 2002-04-17

Complex analysis is a beautiful subject — perhaps the single most beautiful; and striking; in mathematics. It presents completely unforeseen results that are of a dramatic; even magical; nature. This invaluable book will convey to the student its excitement and extraordinary character. The exposition is organized in an especially efficient manner; presenting basic complex analysis in around 130 pages; with about 50 exercises. The material constantly relates to and contrasts with that of its sister subject; real analysis. An unusual feature of this book is a short final chapter containing applications of complex analysis to Lie theory. Since much of the content originated in a one-semester course given at the CUNY Graduate Center; the text will be very suitable for first year graduate students in mathematics who want to learn the basics of this important subject. For advanced undergraduates; there is enough material for a year-long course or; by concentrating on the first three chapters; for one-semester course.

Schaum's Outline of Complex Variables, 2ed - Murray Spiegel 2009-04-14

The guide that helps students study faster, learn better, and get top grades More than 40 million students have trusted Schaum's to help them study faster, learn better, and get top grades. Now Schaum's is better than ever-with a new look, a new format with hundreds of practice problems, and completely updated information to conform to the latest developments in every field of study. Fully compatible with your classroom text, Schaum's highlights all the important facts you need to know. Use Schaum's to shorten your study time-and get your best test scores! Schaum's Outlines-Problem Solved.

A First Course In Complex Analysis, 2/E - Zill 2010-01-01