Complex Variables and Applications

FIFTH EDITION

RUEL V. CHURCHILL
JAMES WARD BROWN

Complex Variables And Applications 5th Edition

Hans J. Weber,George B. Arfken

Complex Variables And Applications 5th Edition:

   Ebook: Complex Variables and Applications Ruel Churchill,James Brown,2014-10-16 Complex Variables and Applications 9e will serve just as the earlier editions did as a textbook for an introductory course in the theory and application of functions of a complex variable This new edition preserves the basic content and style of the earlier editions The text is designed to develop the theory that is prominent in applications of the subject You will find a special emphasis given to the application of residues and conformal mappings To accommodate the different calculus backgrounds of students footnotes are given with references to other texts that contain proofs and discussions of the more delicate results in advanced calculus Improvements in the text include extended explanations of theorems greater detail in arguments and the separation of topics into their own sections   **Complex Variables and Applications** James Ward Brown,Ruel Vance Churchill,1996 This text and accompanying disk provides coverage of complex variables It uses examples and exercise sets with clear explanations of problem solving techniqes and material on the further theory of functions   **Advanced Engineering Mathematics** Alan Jeffrey,2001-06-19 Advanced Engineering Mathematics provides comprehensive and contemporary coverage of key mathematical ideas techniques and their widespread applications for students majoring in engineering computer science mathematics and physics Using a wide range of examples throughout the book Jeffrey illustrates how to construct simple mathematical models how to apply mathematical reasoning to select a particular solution from a range of possible alternatives and how to determine which solution has physical significance Jeffrey includes material that is not found in works of a similar nature such as the use of the matrix exponential when solving systems of ordinary differential equations The text provides many detailed worked examples following the introduction of each new idea and large problem sets provide both routine practice and in many cases greater challenge and insight for students Most chapters end with a set of computer projects that require the use of any CAS such as Maple or Mathematica that reinforce ideas and provide insight into more advanced problems Comprehensive coverage of frequently used integrals functions and fundamental mathematical results Contents selected and organized to suit the needs of students scientists and engineers Contains tables of Laplace and Fourier transform pairs New section on numerical approximation New section on the z transform Easy reference system

   Mathematical Methods For Physicists International Student Edition George B. Arfken,Hans J. Weber,2005-07-05 This best selling title provides in one handy volume the essential mathematical tools and techniques used to solve problems in physics It is a vital addition to the bookshelf of any serious student of physics or research professional in the field The authors have put considerable effort into revamping this new edition Updates the leading graduate level text in mathematical physics Provides comprehensive coverage of the mathematics necessary for advanced study in physics and engineering Focuses on problem solving skills and offers a vast array of exercises Clearly illustrates and proves mathematical relations New in the Sixth Edition Updated content throughout based on users feedback More advanced sections including differential

forms and the elegant forms of Maxwell s equations A new chapter on probability and statistics More elementary sections have been deleted   *Mathematical Methods for Physicists* George Brown Arfken,George B. Arfken,Hans J. Weber,Frank E. Harris,2013 Table of Contents Mathematical Preliminaries Determinants and Matrices Vector Analysis Tensors and Differential Forms Vector Spaces Eigenvalue Problems Ordinary Differential Equations Partial Differential Equations Green s Functions Complex Variable Theory Further Topics in Analysis Gamma Function Bessel Functions Legendre Functions Angular Momentum Group Theory More Special Functions Fourier Series Integral Transforms Periodic Systems Integral Equations Mathieu Functions Calculus of Variations Probability and Statistics   **Essentials of Math Methods for Physicists** Hans J. Weber,George B. Arfken,2013-09-11 Essentials of Math Methods for Physicists aims to guide the student in learning the mathematical language used by physicists by leading them through worked examples and then practicing problems The pedagogy is that of introducing concepts designing and refining methods and practice them repeatedly in physics examples and problems Geometric and algebraic approaches and methods are included and are more or less emphasized in a variety of settings to accommodate different learning styles of students Comprised of 19 chapters this book begins with an introduction to the basic concepts of vector algebra and vector analysis and their application to classical mechanics and electrodynamics The next chapter deals with the extension of vector algebra and analysis to curved orthogonal coordinates again with applications from classical mechanics and electrodynamics These chapters lay the foundations for differential equations variational calculus and nonlinear analysisin later discussions High school algebra of one or two linear equations is also extended to determinants and matrix solutions of general systems of linear equations eigenvalues and eigenvectors and linear transformations in real and complex vector spaces The book also considers probability and statistics as well as special functions and Fourier series Historical remarks are included that describe some physicists and mathematicians who introduced the ideas and methods that were perfected by later generations to the tools routinely used today This monograph is intended to help undergraduate students prepare for the level of mathematics expected in more advanced undergraduate physics and engineering courses   **Essential Mathematical Methods for Physicists, ISE** Hans J. Weber,George B. Arfken,2004 This new adaptation of Arfken and Weber s best selling Mathematical Methods for Physicists fifth edition is the most modern collection of mathematical principles for solving physics problems
    Transcendental Representations with Applications to Solids and Fluids Luis Manuel Braga da Costa Campos,2012-04-04 Building on the author s previous book in the series Complex Analysis with Applications to Flows and Fields CRC Press 2010 Transcendental Representations with Applications to Solids and Fluids focuses on four infinite representations series expansions series of fractions for meromorphic functions infinite products for functions with infinitely many zeros and continued fractions as alternative representations This book also continues the application of complex functions to more classes of fields including incompressible rotational flows compressible irrotational flows unsteady flows rotating flows

surface tension and capillarity deflection of membranes under load torsion of rods by torques plane elasticity and plane viscous flows The two books together offer a complete treatment of complex analysis showing how the elementary transcendental functions and other complex functions are applied to fluid and solid media and force fields mainly in two dimensions The mathematical developments appear in odd numbered chapters while the physical and engineering applications can be found in even numbered chapters The last chapter presents a set of detailed examples Each chapter begins with an introduction and concludes with related topics Written by one of the foremost authorities in aeronautical aerospace engineering this self contained book gives the necessary mathematical background and physical principles to build models for technological and scientific purposes It shows how to formulate problems justify the solutions and interpret the results   A MatLab® Companion to Complex Variables A. David Wunsch,2018-09-03 This book is intended for someone learning functions of a complex variable and who enjoys using MATLAB It will enhance the exprience of learning complex variable theory and will strengthen the knowledge of someone already trained in ths branch of advanced calculus ABET the accrediting board for engineering programs makes it clear that engineering graduates must be skilled in the art of programming in a language such as MATLAB Supplying students with a bridge between the functions of complex variable theory and MATLAB this supplemental text enables instructors to easily add a MATLAB component to their complex variables courses A MATLAB Companion to Complex Variables provides readers with a clear understanding of the utility of MATLAB in complex variable calculus An ideal adjunct to standard texts on the functions of complex variables the book allows professors to quickly find and assign MATLAB programming problems that will strengthen students knowledge of the language and concepts of complex variable theory The book shows students how MATLAB can be a powerful learning aid in such staples of complex variable theory as conformal mapping infinite series contour integration and Laplace and Fourier transforms In addition to MATLAB programming problems the text includes many examples in each chapter along with MATLAB code Fractals the most recent interesting topic involving complex variables demands to be treated with a language such as MATLAB This book concludes with a Coda which is devoted entirely to this visually intriguing subject MATLAB is not without constraints limitations irritations and quirks and there are subtleties involved in performing the calculus of complex variable theory with this language Without knowledge of these subtleties engineers or scientists attempting to use MATLAB for solutions of practical problems in complex variable theory suffer the risk of making major mistakes This book serves as an early warning system about these pitfalls   Books in Print ,1994   **Perry's Chemical Engineers' Handbook, Eighth Edition** Don W. Green,Robert H. Perry,2007-11-13 Get Cutting Edge Coverage of All Chemical Engineering Topics from Fundamentals to the Latest Computer Applications First published in 1934 Perry s Chemical Engineers Handbook has equipped generations of engineers and chemists with an expert source of chemical engineering information and data Now updated to reflect the latest technology and processes of the new millennium the Eighth Edition of this classic guide provides

unsurpassed coverage of every aspect of chemical engineering from fundamental principles to chemical processes and equipment to new computer applications Filled with over 700 detailed illustrations the Eighth Edition of Perry s Chemcial Engineering Handbook features Comprehensive tables and charts for unit conversion A greatly expanded section on physical and chemical data New to this edition the latest advances in distillation liquid liquid extraction reactor modeling biological processes biochemical and membrane separation processes and chemical plant safety practices with accident case histories Inside This Updated Chemical Engineering Guide Conversion Factors and Mathematical Symbols Physical and Chemical Data Mathematics Thermodynamics Heat and Mass Transfer Fluid and Particle Dynamics Reaction Kinetics Process Control Process Economics Transport and Storage of Fluids Heat Transfer Equipment Psychrometry Evaporative Cooling and Solids Drying Distillation Gas Absorption and Gas Liquid System Design Liquid Liquid Extraction Operations and Equipment Adsorption and Ion Exchange Gas Solid Operations and Equipment Liquid Solid Operations and Equipment Solid Solid Operations and Equipment Size Reduction and Size Enlargement Handling of Bulk Solids and Packaging of Solids and Liquids Alternative Separation Processes And Many Other Topics   *Complex Variables Theory and Application* ,1923   *Books in Print Supplement* ,2002   Introduction to Feedback Control Li Qiu,Kemin Zhou,2010 For undergraduate courses in control theory at the junior or senior level Introduction to Feedback Control First Edition updates classical control theory by integrating modern optimal and robust control theory using both classical and modern computational tools This text is ideal for anyone looking for an up to date book on Feedback Control Although there are many textbooks on this subject authors Li Qiu and Kemin Zhou provide a contemporary view of control theory that includes the development of modern optimal and robust control theory over the past 30 years A significant portion of well known classical control theory is maintained but with consideration of recent developments and available modern computational tools   *Mathematics* Don W. Green,Robert H. Perry,2007-10-26 Get Cutting Edge Coverage of All Chemical Engineering Topics from Fundamentals to the Latest Computer Applications First published in 1934 Perry s Chemical Engineers Handbook has equipped generations of engineers and chemists with an expert source of chemical engineering information and data Now updated to reflect the latest technology and processes of the new millennium the Eighth Edition of this classic guide provides unsurpassed coverage of every aspect of chemical engineering from fundamental principles to chemical processes and equipment to new computer applications Filled with over 700 detailed illustrations the Eighth Edition of Perry s Chemcial Engineering Handbook features Comprehensive tables and charts for unit conversion A greatly expanded section on physical and chemical data New to this edition the latest advances in distillation liquid liquid extraction reactor modeling biological processes biochemical and membrane separation processes and chemical plant safety practices with accident case histories Inside This Updated Chemical Engineering Guide Conversion Factors and Mathematical Symbols Physical and Chemical Data Mathematics Thermodynamics Heat and Mass Transfer Fluid and Particle Dynamics Reaction Kinetics Process Control Process Economics

Transport and Storage of Fluids Heat Transfer Equipment Psychrometry Evaporative Cooling and Solids Drying Distillation Gas Absorption and Gas Liquid System Design Liquid Liquid Extraction Operations and Equipment Adsorption and Ion Exchange Gas Solid Operations and Equipment Liquid Solid Operations and Equipment Solid Solid Operations and Equipment Size Reduction and Size Enlargement Handling of Bulk Solids and Packaging of Solids and Liquids Alternative Separation Processes And Many Other Topics **Choice** ,2002-05 **Catalogue of the Lamont Library, Harvard College** Harvard University. Library. Lamont Library,Lamont Library,1953 **Complex Variables with Applications** A. David Wunsch,1983 □□□□□□□□ ,1990 **College Textbooks** Jane Clapp,1960

The Engaging World of Kindle Books: A Detailed Guide Revealing the Benefits of E-book Books: A World of Convenience and Flexibility E-book books, with their inherent mobility and ease of availability, have liberated readers from the limitations of physical books. Done are the days of carrying bulky novels or carefully searching for specific titles in bookstores. Kindle devices, stylish and portable, seamlessly store an extensive library of books, allowing readers to immerse in their preferred reads anytime, anywhere. Whether commuting on a bustling train, relaxing on a sun-kissed beach, or simply cozying up in bed, Kindle books provide an unparalleled level of ease. A Literary Universe Unfolded: Exploring the Wide Array of Kindle Complex Variables And Applications 5th Edition Complex Variables And Applications 5th Edition The E-book Shop, a digital treasure trove of literary gems, boasts an extensive collection of books spanning varied genres, catering to every readers taste and preference. From gripping fiction and thought-provoking non-fiction to classic classics and contemporary bestsellers, the E-book Store offers an unparalleled abundance of titles to discover. Whether seeking escape through engrossing tales of imagination and exploration, diving into the depths of historical narratives, or expanding ones understanding with insightful works of science and philosophical, the E-book Store provides a gateway to a literary universe brimming with limitless possibilities. A Revolutionary Force in the Literary Landscape: The Persistent Impact of E-book Books Complex Variables And Applications 5th Edition The advent of E-book books has undoubtedly reshaped the literary landscape, introducing a paradigm shift in the way books are published, distributed, and read. Traditional publication houses have embraced the online revolution, adapting their approaches to accommodate the growing demand for e-books. This has led to a surge in the accessibility of Kindle titles, ensuring that readers have access to a wide array of bookish works at their fingertips. Moreover, E-book books have equalized entry to literature, breaking down geographical barriers and offering readers worldwide with similar opportunities to engage with the written word. Irrespective of their location or socioeconomic background, individuals can now immerse themselves in the intriguing world of literature, fostering a global community of readers. Conclusion: Embracing the Kindle Experience Complex Variables And Applications 5th Edition Kindle books Complex Variables And Applications 5th Edition, with their inherent convenience, versatility, and wide array of titles, have unquestionably transformed the way we encounter literature. They offer readers the liberty to explore the limitless realm of written expression, anytime, everywhere. As we continue to travel the ever-evolving online scene, Kindle books stand as testament to the enduring power of storytelling, ensuring that the joy of reading remains accessible to all.

Table of Contents Complex Variables And Applications 5th Edition

Complex Variables And Applications 5th Edition Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In todays fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and

manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Complex Variables And Applications 5th Edition PDF books and manuals is the internets largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Complex Variables And Applications 5th Edition PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Complex Variables And Applications 5th Edition free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About Complex Variables And Applications 5th Edition Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Complex Variables And Applications 5th Edition is one of the best book in our library for free trial. We provide copy of Complex Variables And Applications 5th Edition in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Complex Variables And Applications 5th Edition. Where to download Complex Variables And Applications 5th Edition online for free? Are you looking for Complex Variables And Applications 5th Edition PDF? This is definitely going to save you time and cash in something you should think about.

Find Complex Variables And Applications 5th Edition :

engineering science n1 notes antivi
embedded systems building blocks complete and ready to use modules in c
engineering mathematics by jaggi mathur teemallore
embedded systems with arm cortex m3 microcontrollers in assembly language and c
energy questions and answers
english for the media
engine intake valve design
engineering drawing 1st year questions with answers
engineering statics multiple choice questions
engineering physics by g vijayakumari free
encyclopedia computer science and technology
els verbs catalans conjugats

engineering mechanics statics 6th edition solution manual
english as a legal language by christine rossini
engineering mechanics statics 4th edition solutions

Complex Variables And Applications 5th Edition :

Answer Key Vocabulary Power Grade 6 Pdf (Download Only) Page 6. Answer Key Vocabulary Power Grade 6 Pdf - Pages :6/6. Answer Key Vocabulary Power Grade 6 Pdf upload Arnold j. Paterson. 6/6. Downloaded from status ... Vocabulary Power Workbook g6 | PDF | Idiom Vocabulary Power Workbook g6 - Free download as PDF File (.pdf), Text File (.txt) or read online for free. vocabulary workbook for grade six. Level 6 – VocabularyPowerPlus.com Level 6. for Higher Achievement. Prepare for the Common Core PARCC and Smarter Balanced assessments as well as the SAT and ACT. Lesson 1. Answer Key Vocabulary Power Grade 6 Pdf Answer Key Vocabulary Power Grade 6 Pdf. INTRODUCTION Answer Key Vocabulary Power Grade 6 Pdf (PDF) Vocabulary Workbooks (Grades 6-12) Vocabulary Workbooks (Grades 6-12). Glencoe MacGraw Hill Vocabulary Power (Grade 6-12) (Key Stage 3-4). Vocabulary Workbook ~ Grade 6 · Vocabulary Workbook ... Vocabulary Power Grade 6 Lesson 1 Flashcards Study with Quizlet and memorize flashcards containing terms like alarm, anticipation, bewilderment and more. Vocabulary Power Workbook, Grade 6, Teacher Annotated ... Vocabulary Power Workbook, Grade 6, Teacher Annotated Edition [McGraw-Hill Education] on Amazon.com. *FREE* shipping on qualifying offers. Vocabulary Power ... Vocabulary Power Plus - Level 6 Set Help your students build a powerful vocabulary and prepare your students for the SAT, ACT, and Common Core assessments with Vocabulary Power Plus. Designed to ... Vocabulary Power Workbook, Grade 6, Teacher Annotated ... Vocabulary Power Workbook, Grade 6, Teacher Annotated Edition by McGraw-Hill Education - ISBN 10: 0078262259 - ISBN 13: 9780078262258 - Schools - 2001 ... 2021 Ford E-450 Owner Manuals Find your Ford Owner Manual here. Print, read or download a PDF or browse an easy, online, clickable version. Access quick reference guides, ... 2021 E-SERIES Owner's Manual - IIS Windows Server E-450 Cutaway. Maximum. GCWR. Rear Axle. Ratio. Wheelbase. Length. Rear Axle. Option ... This owner's manual and the Ford. Workshop Manual list the recommended. User manual Ford E-450 (2021) (English - 301 pages) Manual. View the manual for the Ford E-450 (2021) here, for free. This manual comes under the category cars and has been rated by 1 people with an average ... 2019 E-SERIES Owner's Manual - IIS Windows Server E-450 Cutaway. Maximum. GCWR. Rear Axle. Ratio. Wheelbase. Length. Rear Axle. Option ... This owner's manual and the Ford. Workshop Manual list the recommended. Repair Manuals & Literature for Ford E-450 Super Duty Get the best deals on Repair Manuals & Literature for Ford E-450 Super Duty when you shop the largest online selection at eBay.com. 2019 Ford E450 Cutaway Van Owner Manual User Guide ... 2019 Ford E450 Cutaway Van Owner Manual User Guide Set DRW 6.8L Triton V10 New ; ISBN. Does not apply ; Accurate description. 4.8 ; Reasonable shipping cost. 5.0. Coachmen RV

Ford E450 Manual View and Download Coachmen RV Ford E450 manual online. 2007 Coachman Freelander 31. Ford E450 motorhomes pdf manual download. Need repair manual for E-450 - help? Jan 14, 2013 — 1968-Present E-Series Van/Cutaway/Chassis - Need repair manual for E-450 - help? - Looking around the net for a Haynes or Chiltons manual ... OEM Service manuals for 2005 Ford E450 Chassis I would like to know where complete factory service manuals can be obtained. I would like the complete set that includes: Chassis, Electrical, Engine, ... Ford E450 F550 Owners Manual1445586157100 | PDF CAUTION! Back-up Pump Lift Control YOU MUST READ AND UNDERSTAND THE MANUFACTURERS Pump Handle OPERATORS MANUAL BEFORE EVER OPERATING THIS LIFT Release Valve. Chevrolet Venture Starter AutoZone's dependable starters rotate the engine between 85 and 150 RPMs and connect to high-amperage batteries so that engines can ignite. New Starter Compatible With 2001-2005 Chevy ... SPECIFICATIONS: 1.4kW/12 Volt, CW, 9-Tooth Pinion UNIT TYPE: PG260D PMGR SERIES: PG260D DESIGN: PMGR VOLTAGE: 12. KW: 1.4. ROTATION: CW NUMBER OF TEETH: 9 2003 Chevrolet Venture - Starter - O'Reilly Auto Parts ACDelco Starter - 337-1030 ... A starter is an electric motor that engages your flexplate to spin your engine on startup. It includes a bendix, which is a ... Chevrolet Venture Starter Low prices on Starter for your Chevrolet Venture at Advance Auto Parts. Find aftermarket and OEM parts online or at a local store near you. Chevrolet Venture Starter Motor New Starter 2003 CHEVROLET VENTURE 3.4L V6. $5499. current price $54.99. New ... Starter - Compatible with 1997 - 2005 Chevy Venture 3.4L V6 1998 1999 2000 2001 ... Starters for Chevrolet Venture for sale Get the best deals on Starters for Chevrolet Venture when you shop the largest online selection at eBay.com. Free shipping on many items | Browse your ... Starter -Chevy 2.2L, S10 2002-2003, Monte Carlo ... Starter for Chevy 2.2L, S10 2002-2003, Monte Carlo 3.4L Venture 410-12260 ; Item Condition, Aftermarket Part ; Unit Type, Starter ; Voltage, 12 ; Rotation, CW. New Starter 2003 CHEVROLET VENTURE 3.4L V6 This starter fits the following: 2003 CHEVROLET VENTURE 3.4L(207) V6 Replaces: AC DELCO 323-1429, 336-1931, 323-1447, 323-1626, 336-1931