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Cambridge International AS and A Level Mathematics: Mechanics 1 Coursebook *Cambridge University Press* **Cambridge AS and A Level Mathematics is a revised series to ensure full syllabus coverage. This coursebook has been revised and updated to ensure that it meets the requirements for the Mechanics 1 (M1) unit of Cambridge AS and A Level Mathematics (9709). This revised edition adds clarifications to sections on forces and equilibrium, kinematics of motion in a straight line and Newton's laws of motion. All of the review questions have been updated to reflect changes in the style of questions asked in the course. Cambridge International AS & A Level Mathematics Probability & Statistics 1** *Hachette UK* **Exam board: Cambridge Assessment International Education Level: A-level Subject: Mathematics First teaching: September 2018 First exams: Summer 2020 Endorsed by Cambridge Assessment International Education to provide full support for Paper 5 of the syllabus for examination from 2020. Take mathematical understanding to the next level with this accessible series, written by experienced authors, examiners and teachers. - Improve confidence as a mathematician with clear explanations, worked examples, diverse activities and engaging discussion points. - Advance problem-solving, interpretation and communication skills through a wealth of questions that promote higher-order thinking. - Prepare for further study or life beyond the classroom by applying mathematics to other subjects and modelling real-world situations. - Reinforce learning with opportunities for digital practice via links to the Mathematics in Education and Industry's (MEI) Integral platform in the eTextbooks.* *To have full access to the eTextbooks and Integral resources you must be subscribed to both Dynamic Learning and Integral. To trial our eTextbooks and/or subscribe to Dynamic Learning, visit: www.hoddereducation.co.uk/dynamic-learning; to view samples of the Integral resources and/or subscribe to Integral, visit integralmaths.org/international Please note that the Integral resources have not been through the Cambridge International endorsement process. This book covers the syllabus content for Probability and Statistics 1, including representation of data, permutations and combinations, probability, discrete random variables and the normal distribution. Available in this series: Five textbooks fully covering the latest Cambridge International AS & A Level Mathematics syllabus (9709) are accompanied by a Workbook, and Student and Whiteboard eTextbooks. Pure Mathematics 1: Student Textbook (ISBN 9781510421721), Student eTextbook (ISBN 9781510420762), Whiteboard eTextbook (ISBN 9781510420779), Workbook (ISBN 9781510421844) Pure Mathematics 2 and 3: Student Textbook (ISBN 9781510421738), Student eTextbook (ISBN 9781510420854), Whiteboard eTextbook (ISBN 9781510420878), Workbook (ISBN 9781510421851) Mechanics: Student Textbook (ISBN 9781510421745), Student eTextbook (ISBN 9781510420953), Whiteboard eTextbook (ISBN 9781510420977), Workbook (ISBN 9781510421837) Probability & Statistics 1: Student Textbook (ISBN 9781510421752), Student eTextbook (ISBN 9781510421066), Whiteboard eTextbook (ISBN 9781510421097), Workbook (ISBN 9781510421875) Probability & Statistics 2: Student Textbook (ISBN 9781510421776), Student eTextbook (ISBN 9781510421158), Whiteboard eTextbook (ISBN 9781510421165), Workbook (9781510421882) Cambridge International A and AS Level Mathematics Pure mathematics 1 This brand new series has been written for the University of Cambridge International Examinations course for AS and A Level Mathematics (9709). This title covers the requirements of P1. The authors are experienced examiners and teachers who have written extensively at this level, so have ensured all mathematical concepts are explained using language and terminology that is appropriate for students across the world. Students are provded with clear and detailed worked examples and questions from Cambridge International past papers, so they have the opportunity for plenty of essential exam practice. Each book contains a free CD-ROM which features the unique 'Personal Tutor' and 'Test Yourself' digital resources that will help students revise and reinforce concepts away from the classroom: - With Personal Tutor each student has access to audio-visual, step-by-step support through exam-style questions - The Test Yourself interactive multiple choice questions identify weaknesses and point students in the right direction Pathophysiology of Cardiovascular Disease** *Springer Science & Business Media* **Pathophysiology of Cardiovascular Disease has been divided into four sections that focus on heart dysfunction and its associated characteristics (hypertrophy, cardiomyopathy and failure); vascular dysfunction and disease; ischemic heart disease; and novel therapeutic interventions. This volume is a compendium of different approaches to understanding cardiovascular disease and identifying the proteins, pathways and processes that impact it. Cambridge International AS and A Level Mathematics: Pure Mathematics 2 & 3 Coursebook** *Cambridge University Press* **This series has been developed specifically for the Cambridge International AS & A Level Mathematics (9709) syllabus to be examined from 2020. Cambridge International AS & A Level Mathematics: Pure Mathematics 2 & 3 matches the corresponding units of the syllabus. It clearly indicates materials required for P3 study only, and contains materials on topics such as logarithmic and exponential functions, trigonometry, differentiation, integration, numerical solutions of equations, vectors and complex numbers. This coursebook contains a variety of features including recap sections for students to check their prior knowledge, detailed explanations and worked examples, end-of-chapter and cross-topic review exercises and 'Explore' tasks to encourage deeper thinking around mathematical concepts. Answers to coursebook questions are at**

the back of the book. Mechanics of Composite Materials, Second Edition *CRC Press* In 1997, Dr. Kaw introduced the first edition of Mechanics of Composite Materials, receiving high praise for its comprehensive scope and detailed examples. He also introduced the groundbreaking PROMAL software, a valuable tool for designing and analyzing structures made of composite materials. Updated and expanded to reflect recent advances in the field, this Second Edition retains all of the features -- logical, streamlined organization; thorough coverage; and self-contained treatment -- that made the first edition a bestseller. The book begins with a question-and-answer style introduction to composite materials, including fresh material on new applications. The remainder of the book discusses macromechanical analysis of both individual lamina and laminate materials; micromechanical analysis of lamina including elasticity based models; failure, analysis, and design of laminates; and symmetrical and nonsymmetrical beams (new chapter). New examples and derivations are included in the chapters on micromechanical and macromechanical analysis of lamina, and the design chapter contains two new examples: design of a pressure vessel and design of a drive shaft. The author also adds key terms and a summary to each chapter. The most current PROMAL software is available via the author's often-updated Web site, along with new multiple-choice questions. With superior tools and complete coverage, Mechanics of Composite Materials, Second Edition makes it easier than ever to integrate composite materials into your designs with confidence. For instructions on downloading the associated PROMAL software, please visit http://www.autarkaw.com/books/composite/promaldownload.html. Detecting, Modelling and Responding to Effusive Eruptions *Geological Society of London* For effusive volcanoes in resource-poor regions, there is a pressing need for a crisis response-chain bridging the global scientific community to allow provision of standard products for timely humanitarian response. As a first step in attaining this need, this Special Publication provides a complete directory of current operational capabilities for monitoring effusive eruptions. This volume also reviews the state-of-the-art in terms of satellite-based volcano hot-spot tracking and lava-flow simulation. These capabilities are demonstrated using case studies taken from well-known effusive events that have occurred worldwide over the last two decades at volcanoes such as Piton de la Fournaise, Etna, Stromboli and Kilauea. We also provide case-type response models implemented at the same volcanoes, as well as the results of a community-wide drill used to test a fully-integrated response focused on an operational hazard-GIS. Finally, the objectives and recommendations of the 'Risk Evaluation, Detection and Simulation during Effusive Eruption Disasters' working group are laid out in a statement of community needs by its members. Cambridge International AS and A Level Mathematics: Mechanics Coursebook *Cambridge University Press* This series has been developed specifically for the Cambridge International AS & A Level Mathematics (9709) syllabus to be examined from 2020. Cambridge International AS & A Level Mathematics: Mechanics matches the corresponding unit of the syllabus, with clear and logical progression through. It contains materials on topics such as velocity and acceleration, force and motion, friction, connected particles, motion in a straight line, momentum, and work and energy. This coursebook contains a variety of features including recap sections for students to check their prior knowledge, detailed explanations and worked examples, end-of-chapter and cross-topic review exercises and 'Explore' tasks to encourage deeper thinking around mathematical concepts. Answers to coursebook questions are at the back of the book. Sound Propagation through the Stochastic Ocean *Cambridge University Press* The ocean is opaque to electromagnetic radiation and transparent to low frequency sound, so acoustical methodologies are an important tool for sensing the undersea world. Stochastic sound-speed fluctuations in the ocean, such as those caused by internal waves, result in a progressive randomisation of acoustic signals as they traverse the ocean environment. This signal randomisation imposes a limit to the effectiveness of ocean acoustic remote sensing, navigation and communication. Sound Propagation through the Stochastic Ocean provides a comprehensive treatment of developments in the field of statistical ocean acoustics over the last 35 years. This will be of fundamental interest to oceanographers, marine biologists, geophysicists, engineers, applied mathematicians, and physicists. Key discoveries in topics such as internal waves, ray chaos, Feynman path integrals, and mode transport theory are addressed with illustrations from ocean observations. The topics are presented at an approachable level for advanced students and seasoned researchers alike. High-Performance Modelling and Simulation for Big Data Applications Selected Results of the COST Action IC1406 cHiPSet *Springer* This open access book was prepared as a Final Publication of the COST Action IC1406 "High-Performance Modelling and Simulation for Big Data Applications (cHiPSet)" project. Long considered important pillars of the scientific method, Modelling and Simulation have evolved from traditional discrete numerical methods to complex data-intensive continuous analytical optimisations. Resolution, scale, and accuracy have become essential to predict and analyse natural and complex systems in science and engineering. When their level of abstraction raises to have a better discernment of the domain at hand, their representation gets increasingly demanding for computational and data resources. On the other hand, High Performance Computing typically entails the effective use of parallel and distributed processing units coupled with efficient storage, communication and visualisation systems to underpin complex data-intensive applications in distinct scientific and technical domains. It is then arguably required to have a seamless interaction of High Performance Computing with Modelling and Simulation in order to store, compute, analyse, and visualise large data sets in science and engineering. Funded by the European Commission, cHiPSet has provided a dynamic trans-European forum for their members and distinguished guests to openly discuss novel perspectives and topics of interests for these two communities. This cHiPSet compendium presents a set of selected case studies related to healthcare, biological data, computational advertising, multimedia, finance, bioinformatics, and telecommunications. Modeling of Carbon Nanotubes, Graphene and their Composites *Springer Science & Business Media* A large part of the research currently being conducted in the fields of materials science and engineering mechanics is devoted to carbon nanotubes and their applications. In this process, modeling is a very attractive investigation tool due to the difficulties in manufacturing and testing of nanomaterials. Continuum modeling offers significant advantages over atomistic modeling. Furthermore, the lack of accuracy in continuum methods can be overtaken by incorporating input data either from experiments or atomistic methods. This book reviews the recent

progress in continuum modeling of carbon nanotubes and their composites. The advantages and disadvantages of continuum methods over atomistic methods are comprehensively discussed. Numerical models, mainly based on the finite element method, as well as analytical models are presented in a comparative way starting from the simulation of isolated pristine and defected nanotubes and proceeding to nanotube-based composites. The ability of continuum methods to bridge different scales is emphasized. Recommendations for future research are given by focusing on what still continuum methods have to learn from the nano-scale. The scope of the book is to provide current knowledge aiming to support researchers entering the scientific area of carbon nanotubes to choose the appropriate modeling tool for accomplishing their study and place their efforts to further improve continuum methods. Business Analysis and Valuation Business Analysis and Valuation has been developed specifically for students undertaking accounting Valuation subjects. With a significant number of case studies exploring various issues in this field, including a running chapter example, it offers a practical and in-depth approach. This second edition of the Palepu text has been revitalised with all new Australian content in parts 1-3, making this edition predominantly local, while still retaining a selection of the much admired and rigorous Harvard case studies in part 4. Retaining the same author team, this new edition presents the field of valuation accounting in the Australian context in a clear, logical and thorough manner. The Flying Circus of Physics *John Wiley & Sons* Witness astounding feats of physics Hurry! Hurry! Come one, come all. Meet a man who can pull two railroad passenger cars with his teeth and a real-life human cannon ball. Come face to face with a dead rattlesnake that still bites. And unlock the secrets to the magician's bodiless head. Welcome to Jearl Walker's Flying Circus of Physics, 2nd Edition, where death-defying stunts, high-flying acrobatics, strange curiosities, and mind-bending illusions are all part of everyday life. You don't need a ticket; you only need to look to the world around you to uncover these fascinating feats of physics. Completely updated and expanded, this Second Edition of Jearl Walker's best-selling book features more than 700 thoroughly intriguing questions about relevant, fun, and completely real physical phenomena. Detailed explanations and references to outside sources guide your way through the problems. You'll discover answers to such questions as: * Can you start a fire with ice? * Why does the sky turn green just before a tornado? * Why do wintergreen LifeSavers glow in the dark when you bite them? * If you are falling in an elevator, should you try to jump up at the last second or lay flat against the floor? * How do electric eels produce their electric field? * Why is wet sand darker than dry sand? * What causes an oasis mirage? * Why do stars twinkle? * Could you drive a car on a ceiling? Foreign Exchange A Practical Guide to the FX Markets *John Wiley & Sons* Praise for Foreign Exchange "Tim Weithers starts by telling the reader that foreign exchange is not difficult, just confusing, but Foreign Exchange: A Practical Guide to the FX Markets proves that money is much more exciting than anything it buys. This useful book is a whirlwind tour of the world's largest market, and the tour guide is an expert storyteller, inserting numerous fascinating insights and quirky facts throughout the book." -John R. Taylor, Chairman, CEO and CIO, FX Concepts "The book reflects the author's doctorate from the University of Chicago, several years' experience as an economics professor, and, most recently, a very successful decade as an executive at a huge international bank. These fundamental ingredients are seasoned with bits of wisdom and experience. What results is a very tasty intellectual stew." -Professor Jack Clark Francis, PhD, Professor of Economics and Finance, Bernard Baruch College "In this book, Tim Weithers clearly explains a very complicated subject. Foreign Exchange is full of jargon and conventions that make it very hard for non-professionals to gain a good understanding. Weither's book is a must for any student or professional who wants to learn the secrets of FX." -Niels O. Nygaard, Director of Financial Mathematics, The University of Chicago "An excellent text for students and practitioners who want to become acquainted with the arcane world of the foreign exchange market." -David DeRosa, PhD, founder, DeRosa Research and Trading, Inc., and Adjunct Professor of Finance, Yale School of Management "Tim Weithers provides a superb introduction to the arcana of foreign exchange markets. While primarily intended for practitioners, the book would be a valuable introduction for students with some knowledge of economics. The text is exceptionally clear with numeric examples and exercises that reinforce concepts. Frequent references are made to the economic theory behind the trading practices." -John F. O'Connell, Professor of Economics, College of the Holy Cross Corporate Treasury and Cash Management *Springer* The book is an analysis of corporate treasury and cash management with the principal financial instruments used by the corporate treasurer. The objectives of the book are to describe how corporate treasury departments should establish a framework for the identity, measurement and management of risk and to describe how corporates should manage and control the operation of their treasury function. Robert Cooper brings his extensive experience as Corporate Treasurer of a large multinational to bear in this comprehensive work. Cambridge International AS & A Level Mathematics Mechanics *Hachette UK* Endorsed by Cambridge Assessment International Education to provide full support for Paper 4 of the syllabus for examination from 2020. Take mathematical understanding to the next level with this accessible series, written by experienced authors, examiners and teachers. - Improve confidence as a mathematician with clear explanations, worked examples, diverse activities and engaging discussion points. - Advance problem-solving, interpretation and communication skills through a wealth of questions that promote higher-order thinking. - Prepare for further study or life beyond the classroom by applying mathematics to other subjects and modelling real-world situations. - Reinforce learning with opportunities for digital practice via links to the Mathematics in Education and Industry's (MEI) Integral platform in the eTextbooks.* *To have full access to the eTextbooks and Integral resources you must be subscribed to both Dynamic Learning and Integral. To trial our eTextbooks and/or subscribe to Dynamic Learning, visit: www.hoddereducation.co.uk/dynamic-learning; to view samples of the Integral resources and/or subscribe to Integral, visit integralmaths.org/international Please note that the Integral resources have not been through the Cambridge International endorsement process. This book covers the syllabus content for Mechanics, including forces and equilibrium, kinematics of motion in a straight line, momentum, Newton's laws of motion, and energy, work and power. Available in this series: Five textbooks fully covering the latest Cambridge International AS & A Level Mathematics syllabus (9709) are accompanied by a Workbook, and Student and Whiteboard eTextbooks. Pure

Mathematics 1: Student Textbook (ISBN 9781510421721), Student eTextbook (ISBN 9781510420762), Whiteboard eTextbook (ISBN 9781510420779), Workbook (ISBN 9781510421844) Pure Mathematics 2 and 3: Student Textbook (ISBN 9781510421738), Student eTextbook (ISBN 9781510420854), Whiteboard eTextbook (ISBN 9781510420878), Workbook (ISBN 9781510421851) Mechanics: Student Textbook (ISBN 9781510421745), Student eTextbook (ISBN 9781510420953), Whiteboard eTextbook (ISBN 9781510420977), Workbook (ISBN 9781510421837) Probability & Statistics 1: Student Textbook (ISBN 9781510421752), Student eTextbook (ISBN 9781510421066), Whiteboard eTextbook (ISBN 9781510421097), Workbook (ISBN 9781510421875) Probability & Statistics 2: Student Textbook (ISBN 9781510421776), Student eTextbook (ISBN 9781510421158), Whiteboard eTextbook (ISBN 9781510421165), Workbook (9781510421882) Cambridge International AS and A Level Mathematics: Pure Mathematics 1 Coursebook *Cambridge University Press* This series has been developed specifically for the Cambridge International AS & A Level Mathematics (9709) syllabus to be examined from 2020. Cambridge International AS & A Level Mathematics: Pure Mathematics 1 matches the corresponding unit of the syllabus, with a clear and logical progression through. It contains materials on topics such as quadratics, functions, coordinate geometry, circular measure, series, differentiation and integration. This coursebook contains a variety of features including recap sections for students to check their prior knowledge, detailed explanations and worked examples, end-of-chapter and cross-topic review exercises and 'Explore' tasks to encourage deeper thinking around mathematical concepts. Answers to coursebook questions are at the back of the book. Call Auction Trading New Answers to Old Questions *Springer Science & Business Media* The electronic call auction is an important trading vehicle in many market centers around the world, and it should play a far more central role in the U.S. equity markets. Yet call auctions are not known or understood by many market participants in the U.S. The purpose of Call Auction Trading: New Answers to Old Questions is to consider how a call auction facility operates and its broader role in the marketplace. A spectrum of questions are raised and debated. What is a call auction? How should call auctions be designed? How should call auction and continuous trading be integrated in a hybrid market structure? What is the price discovery function of a call auction, especially at market openings? When the dust settles on the answers, it may be recognized that the introduction of electronic call auction trading in our markets is one of the most profound changes in U.S. equity market structure that could be made. Handbook of Computability and Complexity in Analysis *Springer Nature* Computable analysis is the modern theory of computability and complexity in analysis that arose out of Turing's seminal work in the 1930s. This was motivated by questions such as: which real numbers and real number functions are computable, and which mathematical tasks in analysis can be solved by algorithmic means? Nowadays this theory has many different facets that embrace topics from computability theory, algorithmic randomness, computational complexity, dynamical systems, fractals, and analog computers, up to logic, descriptive set theory, constructivism, and reverse mathematics. In recent decades computable analysis has invaded many branches of analysis, and researchers have studied computability and complexity questions arising from real and complex analysis, functional analysis, and the theory of differential equations, up to (geometric) measure theory and topology. This handbook represents the first coherent cross-section through most active research topics on the more theoretical side of the field. It contains 11 chapters grouped into parts on computability in analysis; complexity, dynamics, and randomness; and constructivity, logic, and descriptive complexity. All chapters are written by leading experts working at the cutting edge of the respective topic. Researchers and graduate students in the areas of theoretical computer science and mathematical logic will find systematic introductions into many branches of computable analysis, and a wealth of information and references that will help them to navigate the modern research literature in this field. Human Security in Disease and Disaster *Routledge* This timely new textbook lays bare the ways in which disease and disaster can turn politicians into global leaders or national liabilities. It explains the impact of crises on development and human security and explores how states and societies can respond more effectively. Written primarily for the student of politics, but also drawing from public health, public policy, and environmental studies, the book investigates the threats posed by disease and disasters, and demonstrates how states can shape the ways in which these crises unfold. Case studies include: • Diseases such as Covid-19 and Ebola • Natural disasters such as Typhoon Haiyan and the 2010 Haiti earthquake • Manmade disasters such as the Yemen and Congo civil wars or famine The book delves deep into how state response to these challenges can impact political and economic stability and ends by exploring the role played by international institutions and international cooperation in addressing common challenges. This introductory textbook is perfect for undergraduate and masters courses exploring the expanding politics and human security issues surrounding disease and disasters. It will also be of interest to think tanks and policy communities looking for fresh insights to bring into professional practice. Arteriogenesis *Springer Science & Business Media* Covers the topic of collateral circulation and its structure and function; its molecular mechanisms during the course of critical arterial stenosis; and how it can be stimulated by physical and growth factors. Animal models are covered in this volume as they reproduce the clinical situation in the laboratory. The book also contains mechanistic explanations of vascular growth that are reflected in numerous charts. Microneedles for Transdermal Drug Delivery *Springer* This monograph covers a novel technology to deliver drugs and cosmetics through the skin in a minimally invasive manner. Microneedles – a bed of miniaturized needles is one of the most studied topics in delivering actives through the skin barrier. This book enables readers to understand the delivery of ingredients through the skin, describes a novel and simple method to fabricate microneedles containing a range of small and large molecular weight compounds, studies their physical properties as well as delivery through the skin layers. Readers will discover this book to be extremely beneficial to help them understand the state of the field of transdermal drug delivery, with extensive coverage including experimental data on basics of microneedle fabrication technology using photolithography, encapsulation of drugs within the polymeric matrix of microneedles and studying their release patternsin vitro and ex vivo . Academic researchers, pharmaceutical and cosmeceutical industry as well as students of skin science will find this account very useful in their pursuits. As microneedles grow and develop into a commercial

reality with more actives being delivered and significant clinical research being put in, this account will hold well in providing basic principles and knowledge together with rigorous experimental data. **Cambridge International AS and A Level Business Coursebook with CD-ROM** *Cambridge University Press* **This revised set of resources for Cambridge International AS and A Level Business syllabus (9609) is thoroughly updated for the latest version of the curriculum. Written by experienced authors, the Coursebook provides comprehensive coverage of the syllabus. Accessible language combined with the clear, visually-stimulating layout makes this an ideal resource for the course. Questions and explanation of key terms reinforce knowledge; different kinds of activities build application, analytical and evaluation skills; and case studies contextualise the content making it relevant to international learners. It provides thorough examination support for all papers with exam-style questions with each chapter and an extensive Paper 3 style case study with each unit. The student CD-ROM contains revision aids, further questions and activities. A Teacher's CD-ROM is also available. Advanced Oxidation Processes for Water Treatment Fundamentals and Applications** *IWA Publishing* **Advanced Oxidation Processes (AOPs) rely on the efficient generation of reactive radical species and are increasingly attractive options for water remediation from a wide variety of organic micropollutants of human health and/or environmental concern. Advanced Oxidation Processes for Water Treatment covers the key advanced oxidation processes developed for chemical contaminant destruction in polluted water sources, some of which have been implemented successfully at water treatment plants around the world. The book is structured in two sections; the first part is dedicated to the most relevant AOPs, whereas the topics covered in the second section include the photochemistry of chemical contaminants in the aquatic environment, advanced water treatment for water reuse, implementation of advanced treatment processes for drinking water production at a state-of-the art water treatment plant in Europe, advanced treatment of municipal and industrial wastewater, and green technologies for water remediation. The advanced oxidation processes discussed in the book cover the following aspects: - Process principles including the most recent scientific findings and interpretation. - Classes of compounds suitable to AOP treatment and examples of reaction mechanisms. - Chemical and photochemical degradation kinetics and modelling. - Water quality impact on process performance and practical considerations on process parameter selection criteria. - Process limitations and byproduct formation and strategies to mitigate any potential adverse effects on the treated water quality. - AOP equipment design and economics considerations. - Research studies and outcomes. - Case studies relevant to process implementation to water treatment. - Commercial applications. - Future research needs. Advanced Oxidation Processes for Water Treatment presents the most recent scientific and technological achievements in process understanding and implementation, and addresses to anyone interested in water remediation, including water industry professionals, consulting engineers, regulators, academics, students. Editor: Mihaela I. Stefan - Trojan Technologies - Canada GRE Practicing to Take the Computer Science Test** *Educational Testing Serv* **New Strategies Combating Bacterial Infection** *John Wiley & Sons* **Combating bacterial infections calls for a multidisciplinary approach and this is what is on offer here. Written by an experienced international team of researchers from various fields ranging from biotechnology to traditional medicine, the book provides complete and comprehensive coverage of topics relevant to new antibacterial drugs. This ready reference and handbook adopts a novel approach, focusing on combating multi-drug resistance in bacteria by developing antibacterials with new target sites, using new advances in drug discovery as well as natural products. Divided into three sections, the first describes the problem of drug resistance and the need for new drugs, while the second treats recent trends and new classes of drugs, including relevant developments in transcriptomics and proteomics leading to new antimicrobial drug discovery, and a new generation of antibiotics and non-antibiotics. The third section on natural products discusses the antibacterial action of phytocompounds, plant extracts, essential oils and honey as well as the role of probiotics in bacterial infections. Invaluable to students of medicine, pharmaceutical sciences, phytomedicine and microbiology and all those wanting to know about the possibilities and limitations of new antibacterial drugs. Furthermore, its coverage of plants and other natural products makes this relevant to the pharmaceutical and herbal industries. Cambridge International AS and A Level Mathematics: Mechanics 2 Coursebook** *Cambridge University Press* **Cambridge AS and A Level Mathematics is a revised series to ensure full syllabus coverage. This coursebook has been revised and updated to ensure that it meets the requirements for the Mechanics 2 (M2) unit of Cambridge AS and A Level Mathematics (9709). This revised edition adds clarifications to sections on motion of a projectile, equilibrium of a rigid body and linear motion under a variable force. All of the review questions have been updated to reflect changes in the style of questions asked in the course. Cambridge International AS and A Level Mathematics: Revised Edition Statistics 1 Coursebook** *Cambridge University Press* **Cambridge AS and A Level Mathematics is a revised series to ensure full syllabus coverage. This coursebook has been revised and updated to ensure that it meets the requirements for the Statistics (S1) unit of Cambridge AS and A Level Mathematics (9709). This revised edition has been redesigned and adds clarifications on permutations and combinations and additional material on probability. All of the review questions have been updated to reflect changes in the style of questions asked in the course. Noncommutative Geometry and Particle Physics** *Springer* **This book provides an introduction to noncommutative geometry and presents a number of its recent applications to particle physics. It is intended for graduate students in mathematics/theoretical physics who are new to the field of noncommutative geometry, as well as for researchers in mathematics/theoretical physics with an interest in the physical applications of noncommutative geometry. In the first part, we introduce the main concepts and techniques by studying finite noncommutative spaces, providing a "light" approach to noncommutative geometry. We then proceed with the general framework by defining and analyzing noncommutative spin manifolds and deriving some main results on them, such as the local index formula. In the second part, we show how noncommutative spin manifolds naturally give rise to gauge theories, applying this principle to specific examples. We subsequently geometrically derive abelian and non-abelian Yang-Mills gauge theories, and eventually the full Standard Model of particle physics, and conclude by explaining how noncommutative geometry might indicate how to proceed beyond the Standard Model. Plane and**

Spherical Trigonometry World Migration Report 2020 *United Nations* **Since 2000, IOM has been producing world migration reports. The World Migration Report 2020, the tenth in the world migration report series, has been produced to contribute to increased understanding of migration throughout the world. This new edition presents key data and information on migration as well as thematic chapters on highly topical migration issues, and is structured to focus on two key contributions for readers: Part I: key information on migration and migrants (including migration-related statistics); and Part II: balanced, evidence-based analysis of complex and emerging migration issues. Diastolic Relaxation of the Heart Basic Research and Current Applications for Clinical Cardiology** *Springer Science & Business Media* **viewed as rolling downhill from an uphill or This book represents an edited compilation of the scientific presentations given at an Interna high-energy state. This transition results from tional Symposium on the Physiology of Diastole the opening of membrane pores that allow in Health and Disease, September 11 to 14, calcium to rush into the cytosol, triggering 1986, in Cambridge, Massachusetts. Numerous excitation-contraction coupling. If the energy studies have documented the importance of available to sarcoplasmic reticular and sarcolem diastolic dysfunction in clinical heart disease. In mal calcium pumps was insufficient to remove recent years clinicians have become increasingly this calcium from the cytosol and res tore the aware that many patients with congestive heart 1O, OOO-fold calcium gradient, characteristic of failure have completely normal myocardial con the "resting" myocyte, we would live for one tractile function. In these patients, inotropic glorious systole and die in cardiac rigor. The agents provide no clinical benefit and may in well-known phenomenon of rigor mortis re fact exacerbate clinical manifestations of heart minds us that for skeletal muscles as well relaxation is the high-energy state and per failure. These patients, who may be regarded as having diastolic heart failure, represent a major manent contraction is the inevitable downhili therapeutic challenge today. It has also become state for muscle that can no longer produce increasingly apparent that a variety of patho adenosine triphosphate." Left Ventricular Diastolic Dysfunction and Heart Failure** *Lea & Febiger* **Galactic Dynamics Second Edition** *Princeton University Press* **Since it was first published in 1987, Galactic Dynamics has become the most widely used advanced textbook on the structure and dynamics of galaxies and one of the most cited references in astrophysics. Now, in this extensively revised and updated edition, James Binney and Scott Tremaine describe the dramatic recent advances in this subject, making Galactic Dynamics the most authoritative introduction to galactic astrophysics available to advanced undergraduate students, graduate students, and researchers. Every part of the book has been thoroughly overhauled, and many sections have been completely rewritten. Many new topics are covered, including N-body simulation methods, black holes in stellar systems, linear stability and response theory, and galaxy formation in the cosmological context. Binney and Tremaine, two of the world's leading astrophysicists, use the tools of theoretical physics to describe how galaxies and other stellar systems work, succinctly and lucidly explaining theoretical principles and their applications to observational phenomena. They provide readers with an understanding of stellar dynamics at the level needed to reach the frontiers of the subject. This new edition of the classic text is the definitive introduction to the field. ? A complete revision and update of one of the most cited references in astrophysics Provides a comprehensive description of the dynamical structure and evolution of galaxies and other stellar systems Serves as both a graduate textbook and a resource for researchers Includes 20 color illustrations, 205 figures, and more than 200 problems Covers the gravitational N-body problem, hierarchical galaxy formation, galaxy mergers, dark matter, spiral structure, numerical simulations, orbits and chaos, equilibrium and stability of stellar systems, evolution of binary stars and star clusters, and much more Companion volume to Galactic Astronomy, the definitive book on the phenomenology of galaxies and star clusters Effectiveness and Satisfaction in Antenatal Care** *Cambridge University Press* **The potential contribution of antenatal care to health is enormous. However, if this potential is to be fully realised the content and organisation of that care must be more imaginatively conceived and realised and must take into account the uncomfortable paradox that antenatal care is a mixture of science and magic. This book faces that paradox, asking: 'what in antenatal care has been shown by proper scientific method to work?'; 'what is questionable dogma?'; 'what is magic?; 'what should be done now?'. This volume is intended not only for those professionals giving the care and for the potential mothers reveiving it, but also for all those who influence decisions concerning the future of antenatal care, such as politicians, researchers and the public in general. A Level Mathematics: First Aid Kit** *Hachette UK* **Master essential skills and boost progress in A-level Maths with extra support and practice for every topic. 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inclusion of answers provides immediate feedback, making this an extraordinary approach in applying all of physics to problems of the real world.· Hiding Under the Covers, Listening for the Monsters· The Walrus Speaks of Classical Mechanics· Heat Fantasies and Other Cheap Thrills of the Night· The Madness of Stirring Tea· She Comes in Colors Everywhere· The Electrician's Evil and the Ring's Magic· The Walrus Has His Last Say and Leaves Us Assorted Goodies Handbook of Healthcare in the Arab World *Springer* This handbook examines health and medical care in the Arab world from a systems biology approach. It features comprehensive coverage that includes details of key social, environmental, and cultural determinants. In addition, the contributors also investigate the developed infrastructure that manages and delivers health care and medical solutions throughout the region.More than 25 sections consider all aspects of health, from cancer to hormone replacement therapy, from the use of medications to vitamin deficiency in emergency medical care. Chapters highlight essential areas in the wellbeing and care of this population. These topics include women's health care, displaced and refugee women's health needs, childhood health, social and environmental causes of disease, health systems and health management, and a wide range of diseases of various body systems. This resource also explores issues related to access and barriers to health delivery throughout the region.Health in the Arab world is complex and rapidly changing. The health burden in the region is distributed unevenly based on gender, location, as well as other factors. In addition, crises such as armed conflicts and an expanding migrant population place additional stress on systems and providers at all levels. This timely resource will help readers better understand all these major issues and more. It will serve as an ideal guide for researchers in various biological disciplines, public health, and regulatory agencies. Statistics Cambridge International AS and a Level Mathematics *Hodder Education* This brand new series has been written for the University of Cambridge International Examinations course for AS and A Level Mathematics (9709). This title covers the requirements of S1 and S2. The authors are experienced examiners and teachers who have written extensively at this level, so have ensured all mathematical concepts are explained using language and terminology that is appropriate for students across the world. Students are provded with clear and detailed worked examples and questions from Cambridge International past papers, so they have the opportunity for plenty of essential exam practice. Each book contains a free CD-ROM which features the unique 'Personal Tutor' and 'Test Yourself' digital resources that will help students revise and reinforce concepts away from the classroom: - With Personal Tutor each student has access to audio-visual, step-by-step support through exam-style questions - The Test Yourself interactive multiple choice questions identify weaknesses and point students in the right direction