

Math HI 2014 Specimen Paper

Now in its third edition, this comprehensive volume is recognized as the most authoritative review of the epidemiology of infectious disease. Divided into five sections that cover methods in infectious disease epidemiology, airborne transmission, diarrheal diseases, blood and body fluid as a reservoir of infectious diseases, vectorborne and parasite disease, the book includes 'state-of-the-art' chapters on methodological issues, pathogenesis, and comprehensive reviews of virtually all known infectious diseases. New to the Third Edition:1. All chapters updated with significant new information.2. HIV chapter completely updated including results of trials of Male Circumcision, HIV-vaccines, female condoms, Microbicides and new drugs.3. New chapter on Infectious Disease Eradication (e.g. Smallpox, Polio, Measles).4. New chapter on Pneumococcal Disease (with material on S. pneumonia known from the ARI and Vaccine chapters).5. Influenza chapter updated with new material on H1/N1 and control/prevention of Influenza during a pandemic.6. Consolidation of material from the chapters on Outbreaks and Surveillance.7. Nosocomial Infection chapter is shortened and updated with a new section on nosocomial/community MRSA.8. Malaria chapter updated with new information on bed nets, prophylactic therapy of pregnant women and other high risk populations as well as new detailed examination of the organization, implementation, and accomplishments of the WHO–Roll-Back Malaria program; and a new description of the 5th Human Malaria parasite–P.knowlesi and its Epidemiology.9. STD chapter is updated with new information on the rapid diagnosis of STDs using urine PCR-methods as well as new information on partner prophylactic treatment of STDs.10. New information in Chikengunya virus, Enterovirus 71, Nipah and Hendra virus infections to the Emerging infections chapter.11. Hepatitis chapter is revised with new information on HEV virus.12. New brief chapter discussing the various models of behavioral change that are useful in Infectious Diseases research–e.g. Health Belief model etc.

A new series of Exam Preparation guides for the IB Diploma Mathematics HL and SL and Mathematical Studies. This exam preparation guide for the IB Diploma Mathematics Standard Level course breaks the course down into chapters that summarise material and present revision questions by exam question type, so that revision can be highly focused to make best use of students' time. Students can stretch themselves to achieve their best with 'going for the top' questions for those who want to achieve the highest results. Worked solutions for all the mixed and 'going for the top' questions are included, plus exam hints throughout. Guides for Mathematics Higher Level and Mathematical Studies are also available.

Covering development from early childhood through high school in an easy-to-follow format, this book provides future teachers with authentic, research-based strategies and guidelines for their classrooms. The authors apply child development concepts to topics of high interest and relevance to teachers, including classroom discipline, constructivism, social-emotional development, and many others. A strong emphasis on diversity among children is reflected throughout. Case studies and real-world vignettes further bridge the distance between research and the classroom, helping future teachers be better prepared to create an environment that promotes optimal development in children. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Figuring Out Fluency in Mathematics Teaching and Learning, Grades K-8Moving Beyond Basic Facts and MemorizationCorwin Press

Physics, Mechanics and Applications
Community Engagement for Better Schools

Mathematics for the IB Diploma: Analysis and approaches HL
Mathematics Higher Level (core)

Supporting Parents of Children Ages 0-8

13th International Symposium, SEA 2014, Copenhagen, Denmark, June 29 -- July 1, 2014, Proceedings

Enable students to construct, communicate and justify correct mathematical arguments with a range of activities and examples of maths in the real world. - Engage and excite students with examples and photos of maths in the real world, plus inquisitive starter activities to encourage their problem-solving skills - Build mathematical thinking with our 'Toolkit' and mathematical exploration chapter, along with our new toolkit feature of questions, investigations and activities - Develop understanding with key concepts and applications integrated throughout, along with TOK links for every topic - Prepare your students for assessment with worked examples, and extended essay support - Check understanding with review exercise midway and at the end of the coursebook Follows the new 2019 IB Guide for Mathematics: analysis and approaches Higher Level

Because fluency practice is not a worksheet. Fluency in mathematics is more than adeptly using basic facts or implementing algorithms. Real fluency involves reasoning and creativity, and it varies by the situation at hand. Figuring Out Fluency in Mathematics Teaching and Learning offers educators the inspiration to develop a deeper understanding of procedural fluency, along with a plethora of pragmatic tools for shifting classrooms toward a fluency approach. In a friendly and accessible style, this hands-on guide empowers educators to support students in acquiring the repertoire of reasoning strategies necessary to become versatile and nimble mathematical thinkers. It includes: "Seven Significant Strategies" to teach to students as they work toward procedural fluency. Activities, fluency routines, and games that encourage learning the efficiency, flexibility, and accuracy essential to real fluency. Reflection questions, connections to mathematical standards, and techniques for assessing all components of fluency. Suggestions for engaging families in understanding and supporting fluency. Fluency is more than a toolbox of strategies to choose from; it's also a matter of equity and access for all learners. Give your students the knowledge and power to become confident mathematical thinkers.

Discusses the best methods of learning, describing how rereading and rote repetition are counterproductive and how such techniques as self-testing, spaced retrieval, and finding additional layers of information in new material can enhance learning.

Children are already learning at birth, and they develop and learn at a rapid pace in their early years. This provides a critical foundation for lifelong progress, and the adults who provide for the care and the education of young children bear a great responsibility for their health, development, and learning. Despite the fact that they share the same objective - to nurture young children and secure their future success - the various practitioners who contribute to the care and the education of children from birth through age 8 are not acknowledged as a workforce unified by the common knowledge and competencies needed to do their jobs well. Transforming the Workforce for Children Birth Through Age 8 explores the science of child development, particularly looking at implications for the professionals who work with children. This report examines the current capacities and practices of the workforce, the settings in which they work, the policies and infrastructure that set qualifications and provide professional learning, and the government agencies and other funders who support and oversee these systems. This book then makes recommendations to improve the quality of professional practice and the practice environment for care and education professionals. These detailed recommendations create a blueprint for action that builds on a unifying foundation of child development and early learning, shared knowledge and competencies for care and education professionals, and principles for effective professional learning. Young children thrive and learn best when they have secure, positive relationships with adults who are knowledgeable about how to support their development and learning and are responsive to their individual progress. Transforming the Workforce for Children Birth Through Age 8 offers guidance on system changes to improve the quality of professional practice, specific actions to improve professional learning systems and workforce development, and research to continue to build the knowledge base in ways that will directly advance and inform future actions. The recommendations of this book provide an opportunity to improve the quality of the care and the education that children receive, and ultimately improve outcomes for children.

Parenting Matters

Theory and Practice

Publications of the National Bureau of Standards, July 1, 1957, to June 30, 1960

Make It Stick

Child and Adolescent Development in Your Classroom

Figuring Out Fluency in Mathematics Teaching and Learning, Grades K-8

This new and expanded edition is intended to help candidates prepare for entrance examinations in mathematics and scientific subjects, including STEP (Sixth Term Examination Paper). STEP is an examination used by Cambridge Colleges for conditional offers in mathematics. They are also used by some other UK universities and many mathematics departments recommend that their applicants practice on the past papers even if they do not take the examination.Advanced Problems in Mathematics bridges the gap between school and university mathematics, and prepares students for an undergraduate mathematics course. The questions analysed in this book are all based on past STEP questions and each question is followed by a comment and a full solution. The comments direct the reader's attention to key points and put the question in its true mathematical context. The solutions point students to the methodology required to address advanced mathematical problems critically and independently.This book is a must read for any student wishing to apply to scientific subjects at university level and for anyone interested in advanced mathematics. This work was published by Saint Philip Street Press pursuant to a Creative Commons license permitting commercial use. All rights not granted by the work's license are retained by the author or authors.

Featuring a wealth of digital content, this concept-based Print and Enhanced Online Course Book Pack has been developed in cooperation with the IB to provide the most comprehensive support for the new DP Mathematics: analysis and approaches HL syllabus, for first teaching in September 2019.

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This book provides practical support and guidance to help IB Diploma Programme students prepare for their mathematics HL exams.

Learning and Teaching Early Math

Includes Titles of Papers Published in Outside Journals 1950 to 1959, with Subject and Author Indexes

Preparing for University

Intelligent Computing & Optimization

Handbook of Research on STEM Education

The International Baccalaureate® (IB) was founded in Geneva, Switzerland in 1968 as a non-profit educational foundation that endeavored to develop inquiring, knowledgeable and caring young people who would go on to create a better and more peaceful world through intercultural understanding and respect. What began as a single program for internationally mobile students preparing for college has grown into a series of programs for students up to age 19. Barron's is pleased to offer a brand new course review and exam preparation guide for the IB Mathematics SL exam. The content of the book is based on the subject guide, published by the International Baccalaureate Organization. It covers all topics required for exams beginning in 2014 and includes: A full-length diagnostic test with markscheme and fully explained answers Study tips and exam strategies Topic review and practice for each strand of the IB Math SL curriculum, including explanations and examples as well as problem sets with fully explained solutions Two full-length practice exams with markschemes and fully explained answers This all-encompassing book can also serve as a supplement to classroom instruction throughout the two-year IB Math SL course, a resource for the Internal Assessment project, and a review resource during first year college math courses.

The Handbook of Research on STEM Education represents a groundbreaking and comprehensive synthesis of research and presentation of policy within the realm of science, technology, engineering, and mathematics (STEM) education. What distinguishes this Handbook from others is the nature of integration of the disciplines that is the founding premise for the work - all chapters in this book speak directly to the integration of STEM, rather than discussion of research within the individual content areas. The Handbook of Research on STEM Education explores the most pressing areas of STEM within an international context. Divided into six sections, the authors cover topics including: the nature of STEM, STEM learning, STEM pedagogy, curriculum and assessment, critical issues in STEM, STEM teacher education, and STEM policy and reform. The Handbook utilizes the lens of equity and access by focusing on STEM literacy, early childhood STEM, learners with disabilities, informal STEM, socio-scientific issues, race-related factors, gender equity, cultural-relevancy, and parental involvement. Additionally, discussion of STEM education policy in a variety of countries is included, as well as a focus on engaging business/industry and teachers in advocacy for STEM education. The Handbook's 37 chapters provide a deep and meaningful landscape of the implementation of STEM over the past two decades. As such, the findings that are presented within provide the reader with clear directions for future research into effective practice and supports for integrated STEM, which are grounded in the literature to date.

Computational Fluid Dynamics: Principles and Applications, Third Edition presents students, engineers, and scientists with all they need to gain a solid understanding of the numerical methods and principles underlying modern computation techniques in fluid dynamics. By providing complete coverage of the essential knowledge required in order to write codes or understand commercial codes, the book gives the reader an overview of fundamentals and solution strategies in the early chapters before moving on to cover the details of different solution techniques. This updated edition includes new worked programming examples, expanded coverage and recent literature regarding incompressible flows, the Discontinuous Galerkin Method, the Lattice Boltzmann Method, higher-order spatial schemes, implicit Runge-Kutta methods and parallelization. An accompanying companion website contains the sources of 1-D and 2-D Euler and Navier-Stokes flow solvers (structured and unstructured) and grid generators, along with tools for Von Neumann stability analysis of 1-D model equations and examples of various parallelization techniques. Will provide you with the knowledge required to develop and understand modern flow simulation codes Features new worked programming examples and expanded coverage of incompressible flows, implicit Runge-Kutta methods and code parallelization, among other topics Includes accompanying companion website that contains the sources of 1-D and 2-D flow solvers as well as grid generators and examples of parallelization techniques

In this important book for pre- and in-service teachers, early math experts Douglas Clements and Julie Sarama show how "learning trajectories" help diagnose a child's level of mathematical understanding and provide guidance for teaching. By focusing on the inherent delight and curiosity behind young children's mathematical reasoning, learning trajectories ultimately make teaching more joyous. They help teachers understand the varying levels of knowledge exhibited by individual students, which in turn allows them to better meet the learning needs of all children. Using straightforward, no-nonsense language, this book summarizes the current research about how children learn mathematics, and how to build on what children already know to realize more effective teaching. This second edition of Learning and Teaching Early Math remains the definitive, research-based resource to help teachers understand the learning trajectories of early mathematics and become quintessential professionals. Updates to the new edition include: • Explicit connections between Learning Trajectories and the new Common Core State Standards. • New coverage of patterns and patterning. • Incorporation of hundreds of recent research studies.

Experimental Algorithms

Advanced Materials

Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use

Mathematics - Applications and Interpretation

Public Perceptions

Advanced Problems in Mathematics

A new series of Exam Preparation guides for the IB Diploma Mathematics HL and SL and Mathematical Studies. This exam preparation guide for the core content of the IB Diploma Mathematics Higher Level course breaks the course down into chapters that summarise material and present revision questions by exam question type, so that revision can be highly focused to make best use of students' time. Students can stretch themselves to achieve their best with 'going for the top' questions for those who want to achieve the highest results. Worked solutions for all the mixed and 'going for the top' questions are included, plus exam hints throughout. Guides for Mathematics Standard Level and Mathematical Studies are also available.

Drug overdose, driven largely by overdose related to the use of opioids, is now the leading cause of unintentional injury death in the United States. The ongoing opioid crisis lies at the intersection of two public health challenges: reducing the burden of suffering from pain and containing the rising toll of the harms that can arise from the use of opioid medications. Chronic pain and opioid use disorder both represent complex human conditions affecting millions of Americans and causing untold disability and loss of function. In the context of the growing opioid problem, the U.S. Food and Drug Administration (FDA) launched an Opioids Action Plan in early 2016. As part of this plan, the FDA asked the National Academies of Sciences, Engineering, and Medicine to convene a committee to update the state of the science on pain research, care, and education and to identify actions the FDA and others can take to respond to the opioid epidemic, with a particular focus on informing FDA's development of a formal method for incorporating individual and societal considerations into its risk-benefit framework for opioid approval and monitoring.

In the United States, government participation in education has traditionally involved guaranteeing public access, public funding, and public governance to achieve accountability, representativeness and equality. This volume discusses the role of broad regimes of local community actors to promote school improvement through greater civic engagement. Taking a historical perspective, this text examines the relationship between government at the federal, state, and local level and local actors both inside the traditional education regime and those stakeholders outside the schools including parents, non-profit organizations, and businesses. It then drills deeper into the role of state legislatures and finally local leadership both inside and outside the schools to promote change, focusing on efforts that include parental choice through tax incentives, charter schools, magnet schools, and school vouchers to achieve accountability, representativeness and equality. The text examines the perceptions and relationships of various actors in urban education reform in numerous cities across the country with special attention dedicated to Chicago, Illinois, and Milwaukee, Wisconsin to offer a deeper understanding of the barriers to and opportunities for fostering greater civic capacity and engagement in urban education reform, as well as developing inclusive educational policy. Attention is also given to accountability and measuring success, traditionally defined by high stakes testing which fails to consider non-classroom factors within the community that contribute to student performance. An alternative approach is offered driven by a wholistic accounting of various factors that contribute to school success centered around third-party inspections and accreditation. Providing insight into school reform at the local level, this book will be useful to researchers and students interested in public policy, education policy, urban governance, intergovernmental relations, and educational leadership, as well as teaching professionals, administrators, and local government officials.

Decades of research have demonstrated that the parents' mindset and the environment of the family—which includes all primary caregivers—are at the foundation of children's well-being and healthy development. From birth, children are learning and rely on parents and the other caregivers in their lives to protect and care for them. The impact of parents may never be greater than during the earliest years of life, when a child's brain is rapidly developing and when nearly all of her or his experiences are created and shaped by parents and the family environment. Parents help children build and refine their knowledge and skills, charting a trajectory for their health and well-being during childhood and beyond. The experience of parenting also impacts parents themselves. For instance, parenting can enrich and give focus to parents' lives; generate stress or calm; and create any number of emotions, including feelings of happiness, sadness, fulfillment, and anger. Parenting of young children today takes place in the context of significant ongoing developments. These include: a rapidly growing body of science on early childhood; increases in funding for programs and services for families; changing demographics of the U.S. population, and greater diversity of family structure.

Additionally, parenting is increasingly being shaped by technology and increased access to information about parenting. Parenting Matters identifies parenting knowledge, attitudes, and practices associated with positive developmental outcomes in children ages 0-8; universal/preventive and targeted strategies used in a variety of settings that have been effective with parents of young children and that support the identified knowledge, attitudes, and practices; and barriers to and facilitators for parents' use of practices that lead to healthy child outcomes as well as their participation in effective programs and services. This report makes recommendations directed at an array of stakeholders, for promoting the wide-scale adoption of effective programs and services for parents and on areas that warrant further research to inform policy and practice. It is meant to serve as a roadmap for the future of parenting policy, research, and practice in the United States.

Computational Fluid Dynamics: Principles and Applications

The Impact of Virtual and Augmented Reality on Individuals and Society

Moving Beyond Basic Facts and Memorization

The Learning Trajectories Approach

Mathematics for the International Student: Worked solutions

The Immortal Life of Henrietta Lacks

An authorised reissue of the long out of print classic textbook, Advanced Calculus by the late Dr Lynn Loomis and Dr Shlomo Sternberg both of Harvard University has been a revered but hard to find textbook for the advanced calculus course for decades. This book is based on an honors course in advanced calculus that the authors gave in the 1960's. The foundational material, presented in the unstarred sections of Chapters 1 through 11, was normally covered, but different applications of this basic material were stressed from year to year, and the book therefore contains more material than was covered in any one year. It can accordingly be used (with omissions) as a text for a year's course in advanced calculus, or as a text for a three-semester introduction to analysis. The prerequisites are a good grounding in the calculus of one variable from a mathematically rigorous point of view, together with some acquaintance with linear algebra. The reader should be familiar with limit and continuity type arguments and have a certain amount of mathematical sophistication. As possible introductory texts, we mention Differential and Integral Calculus by R Courant, Calculus by T Apostol, Calculus by M Spivak, and Pure Mathematics by G Hardy. The reader should also have some experience with partial derivatives. In overall plan the book divides roughly into a first half which develops the calculus (principally the differential calculus) in the setting of normed vector spaces, and a second half which deals with the calculus of differentiable manifolds.

This book includes innovative research work presented at ICCO2018, the 1st International Conference on Intelligent Computing and Optimization, held in Pattaya, Thailand on October 4–5, 2018. It conference presented topics ranging from power quality, reliability, security assurance, cloud computing, smart cities, renewable energy, agro-engineering, smart vehicles, deep learning, block chain, power systems, AI, machine learning, manufacturing systems, and big-data analytics. This volume focuses on subjects related to innovative computing, uncertainty management and optimization approaches to real-world problems in big data, smart cities, sustainability, meta-heuristics, cyber-security, IoTs, economics and finance, renewable energy, energy and electricity systems, and block chain. Presenting cutting-edge methodologies with real-world application problems and their solutions, the book is useful for researchers, managers, executives, students, academicians, practicing scientists, and decision makers from all around the globe. It offers the academic and the applied communities a compendium and a research resource with significant insights and inspiration for innovative scientific education, investigation and collaboration, to overcome "hard problems" among the emerging challenges today and in the future.

The Handbook of Research on the Education of Young Children, Second Edition is an essential reference on research in early childhood education not only in the United States but throughout the world. It provides a comprehensive overview of important contemporary issues and the information necessary to make judgments about these issues. The field has changed significantly since the publication of the first edition of this Handbook in 1993, creating a need for an update. The Handbook of Research on the Education of Young Children, Second Edition is thus focused on research conducted over the past decade or so. The volume is organized in four parts: "Early Childhood Education and Child Development. New in this edition: moral development; the development of creativity." Early Childhood Educational Curriculum. New in this edition: movement or dance education; the education of linguistically and culturally diverse children. "Foundations of Early Childhood Educational Policy. New in this edition: childhood poverty; the education of bilingual children. "Research and Evaluation Strategies for Early Childhood Education. New in this edition: doing historical research in early childhood education; postmodern and feminist orientations. The Handbook of Research on the Education of Young Children, Second Edition makes the expanding knowledge base related to early childhood education readily available and accessible. It is a valuable tool for all who work and study in the field.

A 2022 SPE Outstanding Book Honorable Mention Our society urgently needs education that motivates, challenges, engages, and affirms all students. No matter their previous successes or failures, every student has enormous learning potential and important contributions to make now and in the future. Such meaningful learning experiences don't just happen, they need to be intentionally designed. This book supports those who will undertake this vitally important work. Learning that Matters: A Field Guide to Course Design for Transformative Education is a pragmatic resource for designing courses that engage college students as active citizens. This "work" book provides research-informed approaches for creating learning experiences and developing innovative, intellectually-engaging courses. Whether a novice or a veteran, by engaging with the text, collaborating with colleagues, and reflecting on the important work of a teacher, any motivated educator can become a transformative educator. Every college course has the potential to transform students' lives. Through implementation of critical concepts such as connected and authentic assessments; dilemmas, issues, and questions; portable thinking skills and engaging strategies; and a purposeful focus on inclusivity and equity, readers begin the process of change needed for preparing students who will be able to address the monumental challenges facing our society. Click HERE to watch the book launch. Click HERE to hear the authors discuss their book. Perfect for courses such as: Education Curriculum and Instruction | Design for Transformative Learning | An Introduction to Evidence-based Undergraduate Teaching | New Faculty Mathematics | Freshman Seminar Faculty Trainings | Center for Teaching & Learning | Workshops in Course Design

Mathematics HL

Revised

for the IB Diploma

Learning That Matters

Publications

Subject Index of the London Library, St. James's Square, London

This book presents the most serious and comprehensive study, by far, of American public perceptions about the meaning of space exploration, analyzing vast troves of questionnaire data collected by many researchers and polling firms over a span of six decades and anchored in influential social science theories. It doesn't simply report the percentages who held various opinions, but employs sophisticated statistical techniques to answer profound questions and achieve fresh discoveries. Both the Bush and the Obama administrations have cut back severely on fundamental research in space science and engineering. Understanding better what space exploration means for citizens can contribute to charting a feasible but progressive course. Since the end of the Space Race between the US and the USSR, social scientists have almost completely ignored space exploration as a topic for serious analysis and this book seeks to revive that kind of contribution. The author communicates the insights in a lucid style, not only intelligible but interesting to readers from a variety of backgrounds. Advanced materials are the basis of modern science and technology. This proceedings volume presents a broad spectrum of studies of novel materials covering their processing techniques, physics, mechanics, and applications. The book is concentrated on nanostructures, ferroelectric crystals, materials and composites, materials for solar cells and also polymeric composites. Nanotechnology approaches, modern piezoelectric techniques and also latest achievements in materials science, condensed matter physics, mechanics of deformable solids and numerical methods are presented. Great attention is devoted to novel devices with high accuracy, longevity and extended possibilities to work in wide temperature and pressure ranges, aggressive media etc. The characteristics of materials and composites with improved properties opening new possibilities of various physical processes, in particular transmission and receipt of signals under water, are described.

#1 NEW YORK TIMES BESTSELLER • "The story of modern medicine and bioethics—and, indeed, race relations—is refracted beautifully, and movingly."—Entertainment Weekly NOW A MAJOR MOTION PICTURE FROM HBO® STARRING OPRAH WINFREY AND ROSE BYRNE • ONE OF THE "MOST INFLUENTIAL" (CNN), "DEFINING" (LITHUB), AND "BEST" (THE PHILADELPHIA INQUIRER) BOOKS OF THE DECADE • ONE OF ESSENCE'S 50 MOST IMPACTFUL BLACK BOOKS OF THE PAST 50 YEARS • WINNER OF THE CHICAGO TRIBUNE HEARTLAND PRIZE FOR NONFICTION NAMED ONE OF THE BEST BOOKS OF THE YEAR BY THE New York Times Book Review • Entertainment Weekly • O: The Oprah Magazine • NPR • Financial Times • New York • Independent (U.K.) • Times (U.K.) • Publishers Weekly • Library Journal • Kirkus Reviews • Booklist • Globe and Mail Her name was Henrietta Lacks, but scientists know her as HeLa. She was a poor Southern tobacco farmer who worked the same land as her slave ancestors, yet her cells—taken without her knowledge—became one of the most important tools in medicine: The first "immortal" human cells grown in culture, which are still alive today, though she has been dead for more than sixty years. HeLa cells were vital for developing the polio vaccine; uncovered secrets of cancer, viruses, and the atom bomb's effects; helped lead to important advances like in vitro fertilization, cloning, and gene mapping; and have been bought and sold by the billions. Yet Henrietta Lacks remains virtually unknown, buried in an unmarked grave. Henrietta's family did not learn of her "immortality" until more than twenty years after her death, when scientists investigating HeLa began using her husband and children in research without informed consent. And though the cells had launched a multimillion-dollar industry that sells human biological materials, her family never saw any of the profits. As Rebecca Skloot so brilliantly shows, the story of the Lacks family—past and present—is inextricably connected to the dark history of experimentation on African Americans, the birth of bioethics, and the legal battles over whether we control the stuff we are made of. Over the decade it took to uncover this story, Rebecca became enmeshed in the lives of the Lacks family—especially Henrietta's daughter Deborah. Deborah was consumed with questions:—Has scientists cloned her mother? Had they killed her to harvest her cells? And if her mother was so important to medicine, why couldn't her children afford health insurance? Intimate in feeling, astonishing in scope, and impossible to put down, The Immortal Life of Henrietta Lacks captures the beauty and drama of scientific discovery, as well as its human consequences.

A comprehensive guide to the conceptual, mathematical, and implementation aspects of analyzing electrical brain signals, including data from MEG, EEG, and LFP recordings. This book offers a comprehensive guide to the theory and practice of analyzing electrical brain signals. It explains the conceptual, mathematical, and implementation (via Matlab programming) aspects of time-, time-frequency-, and synchronization-based analyses of magnetoencephalography (MEG), electroencephalography (EEG), and local field potential (LFP) recordings from humans and nonhuman animals. It is the only book on the topic that covers both the theoretical background and the implementation in language that can be understood by readers without extensive formal training in mathematics, including cognitive scientists, neuroscientists, and psychologists. Readers who go through the book chapter by chapter and implement the examples in Matlab will develop an understanding of why and how analyses are performed, how to interpret results, what the methodological issues are, and how to perform single-subject-level and group-level analyses. Researchers who are familiar with using automated programs to perform advanced analyses will learn what happens when they click the "analyze now" button. The book provides sample data and downloadable Matlab code. Each of the 38 chapters covers one analysis topic, and these topics progress from simple to advanced. Most chapters conclude with exercises that further develop the material covered in the chapter. Many of the methods presented (including convolution, the Fourier transform, and Euler's formula) are fundamental and form the groundwork for other advanced data analysis methods. Readers who master the theory in the book will be well prepared to learn other approaches.

Mathematics Higher Level for the IB Diploma Exam Preparation Guide

A Unifying Foundation

Guaranteeing Accountability, Representativeness and Equality

Publications of the National Bureau of Standards

Mathematics - Analysis and Approaches

The Meaning and Value of Spaceflight

This book constitutes the refereed proceedings of the 13th International Symposium on Experimental Algorithms, SEA 2014, held in Copenhagen, Denmark, in June/July 2014. The 36 revised full papers presented together with 3 invited presentations were carefully reviewed and selected from 81 submissions. The papers are organized in topical sections on combinatorial optimization, data structures, graph drawing, shortest path, strings, graph algorithms and suffix structures. The most comprehensive match to the new 2014 Chemistry syllabus, this completely revised edition gives you unrivalled support for the new concept-based approach, the Nature of science. The only DP Chemistry resource that includes support directly from the IB, focused exam practice, TOK links and real-life applications drive achievement. This book constitutes the refereed conference proceedings of the 15th International Conference, ACGV 2017, held in Leiden, The Netherlands, in July 2017. The 19 revised full papers were selected from 23 submissions and cover a wide range of computer games. They are grouped in four classes according to the order of publication: games and puzzles, go and chess, machine learning and MCTS, and gaming.

IB Physics Course Book

15th International Conferences, ACG 2017, Leiden, The Netherlands, July 3-5, 2017, Revised Selected Papers

Transforming the Workforce for Children Birth Through Age 8

A Field Guide to Course Design for Transformative Education

Analysis and approaches HL

Pain Management and the Opioid Epidemic