

Pixel Maths Past Papers

Early childhood mathematics is vitally important for young children's present and future educational success. Research demonstrates that virtually all young children have the capability to learn and become competent in mathematics. Furthermore, young children enjoy their early informal experiences with mathematics. Unfortunately, many children's potential in mathematics is not fully realized, especially those children who are economically disadvantaged. This is due, in part, to a lack of opportunities to learn mathematics in early childhood settings or through everyday experiences in the home and in their communities. Improvements in early childhood mathematics education can provide young children with the foundation for school success. Relying on a comprehensive review of the research, Mathematics Learning in Early Childhood lays out the critical areas that should be the focus of young children's early mathematics education, explores the extent to which they are currently being incorporated in early childhood settings, and identifies the changes needed to improve the quality of mathematics experiences for young children. This book serves as a call to action to improve the state of early childhood mathematics. It will be especially useful for policy makers and practitioners-those who work directly with children and their families in shaping the policies that affect the education of young children.

This cross-disciplinary book documents the key research challenges in the mathematical sciences and physics that could enable the economical development of novel biomedical imaging devices. It is hoped that the infusion of new insights from mathematical scientists and physicists will accelerate progress in imaging. Incorporating input from dozens of biomedical researchers who described what they perceived as key open problems of imaging that are amenable to attack by mathematical scientists and physicists, this book introduces the frontiers of biomedical imaging, especially the imaging of dynamic physiological functions, to the educated nonspecialist. Ten imaging modalities are covered, from the well-established (e.g., CAT scanning, MRI) to the more speculative (e.g., electrical and magnetic source imaging). For each modality, mathematics and physics research challenges are identified and a short list of suggested reading offered. Two additional chapters offer visions of the next generation of surgical and interventional techniques and of image processing. A final chapter provides an overview of mathematical issues that cut across the various modalities.

Technology is at the heart of learning for all of us and every teacher needs to be using social media, mobile technologies and transformational digital learning opportunities as an integral part of their range of strategies for helping students make the maximum progress. In this book in the 'Perfect' series, Mark Anderson, the ICT Evangelist, takes the technology-related elements of all the recent subject reports from Ofsted and using them offers clear and practical strategies that are proven to be successful in classrooms and offers up ideas for how they can be turned into a daily reality for all teachers.

Earn College Credit with REA's Test Prep for CLEP® Precalculus Everything you need to pass the exam and get the college credits you deserve. CLEP® is the most popular credit-by-examination program in the country, accepted by more than 2,900 colleges and universities. For over 15 years, REA has helped students pass CLEP® exams and earn college credit while reducing their tuition costs. Our CLEP® test preps are perfect for adults returning to college (or attending for the first time), military service members, high-school graduates looking to earn college credit, or home-schooled students with knowledge that can translate into college credit. The CLEP® Precalculus test prep assesses the skills tested on the official CLEP® exam. Our comprehensive review chapters cover: algebraic expressions, equations, and inequalities; functions: concept, properties, and operations; representations of functions; analytic geometry; trigonometry and more. The book includes two full-length practice tests. Each exam comes with detailed feedback on every question. We don't just say which answers are right-we explain why the other answer choices are wrong-so you can identify your strengths and weaknesses while building your skills. REA is the acknowledged leader in CLEP® preparation, with the most extensive library of CLEP® titles available. Our test preps for CLEP® exams help you earn college credit, save on tuition, and get a college degree.

Mathematics and Physics of Emerging Biomedical Imaging

The Book of R

The Canadian Who's who

BIM Handbook

College Algebra

The Original Area Mazes

This book provides an introduction to the mathematical and algorithmic foundations of data science, including machine learning, high-dimensional geometry, and analysis of large networks. Topics include the counterintuitive nature of data in high dimensions, important linear algebraic techniques such as singular value decomposition, the theory of random walks and Markov chains, the fundamentals of and important algorithms for machine learning, algorithms and analysis for clustering, probabilistic models for large networks, representation learning including topic modelling and non-negative matrix factorization, wavelets and compressed sensing. Important probabilistic techniques are developed including the law of large numbers, tail inequalities, analysis of random projections, generalization guarantees in machine learning, and moment methods for analysis of phase transitions in large random graphs. Additionally, important structural and complexity measures are discussed such as matrix norms and VC-dimension. This book is suitable for both undergraduate and graduate courses in the design and analysis of algorithms for data.

Summary Generative Art presents both the technique and the beauty of algorithmic art. The book includes high-quality examples of generative art, along with the specific programmatic steps author and artist Matt Pearson followed to create each unique piece using the Processing programming language. About the Technology Artists have always explored new media, and computer-based artists are no exception. Generative art, a technique where the artist creates print or onscreen images by using computer algorithms, finds the artistic intersection of programming, computer graphics, and individual expression. The book includes a tutorial on Processing, an open source programming language and environment for people who want to create images, animations, and interactions. About the Book Generative Art presents both the techniques and the beauty of algorithmic art. In it, you'll find dozens of high-quality examples of generative art, along with the specific steps the author followed to create each unique piece using the Processing programming language. The book includes concise tutorials for each of the technical components required to create the book's images, and it offers countless suggestions for how you can combine and reuse the various techniques to create your own works. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside The principles of algorithmic art A Processing language tutorial Using organic, pseudo-random, emergent, and fractal processes =====?===== Table of Contents Part I Creative Coding Generative Art: In Theory and Practice Processing: A Programming Language for ArtistsPart 2 Randomness and Noise The Wrong Way to Draw A Line The Wrong Way to Draw a Circle Adding Dimensions Part 3 Complexity Emergence Autonomy Fractals

After a violent mugging forever altered the way his brain works, the author, the first documented case of acquired savant syndrome with mathematical synesthesia, recounts how he overcame huge setbacks and embraced his unique gifts.

Everything you need to pass the TASC If you're looking to gauge your readiness for the high schoolequivalency exam and want to give it all you've got, TASC ForDummies has everything you need. The TASC (Test Assessing Secondary Completion) is a state-of-theart, affordable, national high school equivalency assessment thatevaluates five subject areas: reading, writing, mathematics,science, and social studies. With the help of this hands-on,friendly guide, you'll gain the confidence and skills needed toscore your highest and gain your high school diplomaequivalency. Helps you measure your career and college readiness, asoutlined by the Common Core State Standards Focuses entirely on the 5 sections of the TASC and the variousquestion types you'll encounter on test day Includes two full-length TASC practice tests with compleanswers and explanations So far, New York, Indiana, New Jersey, West Virginia, Wyoming,and Nevada have adopted TASC as their official high schoolequivalency assessment test. If you're a resident of one of thesstates and want an easy-to-grasp introduction to the exam, TASCFor Dummies has you covered. Written in plain English andpacked with tons of practical and easy-to-follow explanations, itgets you up to speed on this alternative to the GED.

Fundamentals of Mathematics

3D Computer Graphics

A Programmer's Guide, Second Edition

Exploring Geometry, Second Edition

Real-Time Rendering

CUDA is a computing architecture designed to facilitate the development of parallel programs. In conjunction with a comprehensive software platform, the CUDA Architecture enables programmers to draw on the immense power of graphics processing units (GPUs) when building high-performance applications. GPUs, of course, have long been available for demanding graphics and game applications. CUDA now brings this valuable resource to programmers working on applications in other domains, including science, engineering, and finance. No knowledge of graphics programming is required—just the ability to program in a modestly extended version of C. CUDA by Example, written by two senior members of the CUDA software platform team, shows programmers how to employ this new technology. The authors introduce each area of CUDA development through working examples. After a concise introduction to the CUDA platform and architecture, as well as a quick-start guide to CUDA C, the book details the techniques and trade-offs associated with each key CUDA feature. You'll discover when to use each CUDA C extension and how to write CUDA software that delivers truly outstanding performance. Major topics covered include Parallel programming Thread cooperation Constant memory and events Texture memory Graphics interoperability Atomics Streams CUDA C on multiple GPUs Advanced atomics Additional CUDA resources All the CUDA software tools you'll need are freely available for download from NVIDIA.

http://developer.nvidia.com/object/cuda-by-example.html

Thoroughly revised, this third edition focuses on modern techniques used to generate synthetic three-dimensional images in a fraction of a second. With the advent of programmable shaders, a wide variety of new algorithms have arisen and evolved over the past few years. This edition discusses current, practical rendering methods used in games and other applications. It also presents a solid theoretical framework and relevant mathematics for the field of interactive computer graphics, all in an approachable style. The authors have made the figures used in the book available for download for fair use. Download Figures. Reviews Rendering has been a required reference for professional graphics practitioners for nearly a decade. This latest edition is as relevant as ever, covering topics from essential mathematical foundations to advanced techniques used by today's cutting edge games. -- Gabe Newell, President, Valve, May 2008 Rendering ... has been completely revised and revamped for its updated third edition, which focuses on modern techniques used to generate three-dimensional images in a fraction of the time old processes took. From practical rendering for games to math and details for better interactive applications, it's not to be missed. -- The Bookwatch, November 2008 You'll get brilliantly lucid explanations of concepts like vertex morphing and variance shadow mapping—as well as a new respect for the incredible craftsmanship that goes into today's PC games. -- Logan Decker, PC Gamer Magazine , February 2009

This open access book is the first major publication on the topic of “Interdisciplinary Mathematics Education” and arose from the work of the first International Topic Study Group of the same name at the ICME-13 conference in Hamburg in 2016. It offers extensive theoretical insights, empirical research, and practitioner accounts of interdisciplinary mathematics work in STEM and beyond (e.g. in music and the arts). Scholars and practitioners from four continents contributed to this comprehensive book, and present studies on: the conceptualizations of interdisciplinarity; implementation cases at schools and tertiary institutions; teacher education; and implications for policy and practice. Each chapter, and the book itself, closes with an assessment of the most significant aspects that those involved in policy and practice, as well as future researchers, should take into account.

This is a graduate text introducing the fundamentals of measure theory and integration theory, which is the foundation of modern real analysis. The text focuses first on the concrete setting of Lebesgue measure and the Lebesgue integral (which in turn is motivated by the more classical concepts of Jordan measure and the Riemann integral), before moving on to abstract measure and integration theory, including the standard convergence theorems, Fubini's theorem, and the Carathéodory extension theorem. Classical differentiation theorems, such as the Lebesgue and Rademacher differentiation theorems, are also covered, as are connections with probability theory. The material is intended to cover a quarter or semester's worth of material for a first graduate course in real analysis. There is an emphasis in the text on tying together the abstract and the concrete sides of the subject, using the latter to illustrate and motivate the former. The central role of key principles (such as Littlewood's three principles) as providing guiding intuition to the subject is also emphasized. There are a large number of exercises throughout that develop key aspects of the theory, and are thus an integral component of the text. As a supplementary section, a discussion of general problem-solving strategies in analysis is also given. The last three sections discuss optional topics related to the main matter of the book.

A First Course in Programming and Statistics

GED Test 2022 / 2023 For Dummies with Online Practice

The State of the Art and Beyond

Category Theory for the Sciences

Newsletter

Essential Tools for Working with Data

Discover BIM: A better way to build better buildings Building Information Modeling (BIM) offers a novel approach to design, construction, and facility management in which a digital representation of the building product and process is used to facilitate the exchange and interoperability of information in digital format. BIM is beginning to change the way buildings look, the way they function, and the ways in which they are designed and built. The BIM Handbook, Third Edition provides an in-depth understanding of BIM technologies, the business and organizational issues associated with its implementation, and the profound advantages that effective use of BIM can provide to all members of a project team. Updates to this edition include: Information on the ways in which professionals should use BIM to gain maximum value New topics such as collaborative working, national and major construction clients, BIM standards and guides A discussion on how various professional roles have expanded through the widespread use and the new avenues of BIM practices and services A wealth of new case studies that clearly illustrate exactly how BIM is applied in a wide variety of conditions Painting a colorful and thorough picture of the state of the art in building information modeling, the BIM Handbook, Third Edition guides readers to successful implementations, helping them to avoid needless frustration and costs and take full advantage of this paradigm-shifting approach to construct better buildings that consume fewer materials and require less time, labor, and capital resources.

Professor Michael Edgeworth McIntyre is an eminent scientist who has also had a part-time career as a musician. From a lifetime's thinking, he offers this extraordinary synthesis exposing the deepest connections between science, music, and mathematics, while avoiding equations and technical jargon. He begins with perception psychology and the dichotomization instinct and then takes us through biological evolution, human language, and acasuality ilussions all the way to the climate crisis and the weaponization of the social media, and beyond that into the deepest parts of theoretical physics — demonstrating our unconscious mathematical abilities.He also has an important message of hope for the future. Contrary to popular belief, biological evolution has given us not only the nastiest, but also the most compassionate and cooperative parts of human nature. This insight comes from recognizing that biological evolution is more than a simple competition between selfish genes. Rather, he suggests, in some ways it is more like turbulent fluid flow, a complex process spanning a vast range of timescales.Professor McIntyre is a Fellow of the Royal Society of London (FRS) and has worked on problems as diverse as the Sun's magnetic interior, the Antarctic ozone hole, jet streams in the atmosphere, and the psychophysics of violin sound. He has long been interested in how different branches of science can better communicate with each other and with the public, harnessing aspects of neuroscience and psychology that point toward the deep 'lucidity principles' that underlie skilful communication.

The Book of R is a comprehensive, beginner-friendly guide to R, the world's most popular programming language for statistical analysis. Even if you have no programming experience and little more than a grounding in the basics of mathematics, you'll find everything you need to begin using R effectively for statistical analysis. You'll start with the basics, like how to handle data and write simple programs, before moving on to more advanced topics, like producing statistical summaries of your data and performing statistical tests and modeling. You'll even learn how to create impressive data visualizations with R's basic graphics tools and contributed packages, like ggplot2 and ggviz, as well as interactive 3D visualizations using the rgl package. Dozens of hands-on exercises (with downloadable solutions) take you from theory to practice, as you learn: -The fundamentals of programming in R, including how to write data frames, create functions, and use variables, statements, and loops -Statistical concepts like exploratory data analysis, probabilities, hypothesis tests, and regression modeling, and how to execute them in R -How to access R's thousands of functions, libraries, and data sets -How to draw valid and useful conclusions from your data -How to create publication-quality graphics of your results Combining detailed explanations with real-world examples and exercises, this book will provide you with a solid understanding of both statistics and the depth of R's functionality. Make The Book of R your doorway into the growing world of data analysis.

This textbook, first published in 2003, emphasises the fundamentals and the mathematics underlying computer graphics. The minimal prerequisites, a basic knowledge of calculus and vectors plus some programming experience in C or C++, make the book suitable for self study or for use as an advanced undergraduate or introductory graduate text. The author gives a thorough treatment of transformations and viewing, lighting and shading models, interpolation and averaging, Bézier curves and B-splines, ray tracing and radiosity, and intersection testing with rays. Additional topics, covered in less depth, include texture mapping and colour theory. The book covers some aspects of animation, including quaternions, orientation, and inverse kinematics, and includes source code for a Ray Tracing software package. The book is intended for use along with any OpenGL programming book, but the crucial features of OpenGL are briefly covered to help readers get up to speed. Accompanying software is available freely from the book's web site.

Math Art and Drawing Games for Kids

Calculus

How Not to Be Wrong

Computer Education

Python Data Science Handbook

Introduction to Applied Linear Algebra

Backpacker

From preeminent math personality and author of The Joy of x, a brilliant and endlessly appealing explanation of calculus - how it works and why it makes our lives immeasurably better. Without calculus, we wouldn't have cell phones, TV, GPS, or ultrasound. We wouldn't have unraveled DNA or discovered Neptune or figured out how to put 5,000 songs in your pocket. Though many of us were scared away from this essential, engrossing subject in high school and college, Steven Strogatz's brilliantly creative, down to earth history shows that calculus is not about complexity; it's about simplicity. It harnesses an unreal number--infinity--to tackle real world problems, breaking them down into easier ones and then reassembling the answers into solutions that feel miraculous. Infinite Powers recounts how calculus tantalized and thrilled its inventors, starting with its first glimmers in ancient Greece and bringing us right up to the discovery of gravitational waves (a phenomenon predicted by calculus). Strogatz reveals how this form of math rose to the challenges of each age: how to determine the area of a circle with only sand and a stick; how to explain why Mars goes "backwards" sometimes; how to make electricity with magnets; how to ensure your rocket doesn't miss the moon; how to turn the tide in the fight against AIDS. As Strogatz proves, calculus is truly the language of the universe. By unveiling the principles of that language, Infinite Powers makes us marvel at the world anew.

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the Python Data Science Handbook do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

In Math Art and Drawing Games for Kids, you'll find an amazing collection of more than 40 hands-on art activities that make learning about math fun! Create fine art-inspired projects using math, including M. C. Escher's tessellations, Wassily Kandinski's abstractions, and Alexander Calder's mobiles. Make pixel art using graph paper, grids, and dot grids. Explore projects that teach symmetry with mandala drawings, stained glass rose window art, and more. Use equations, counting, addition, and multiplication to create Fibonacci and golden rectangle art. Play with geometric shapes like spirals, hexagrams, and tetrahedrons. Learn about patterns and motifs used by cultures from all over the world, including Native American porcupine quill art, African Kente prints, and labyrinths from ancient Crete. Cook up some delicious math by making cookie tangrams, waffle fractions, and bread art.

Take a creative path to mastering math with Math Art and Drawing Games for Kids!

Infinite Powers

A Mathematical Introduction with OpenGL
 Foundations of Data Science
 CLEP Precalculus
 How a Brain Injury Made Me a Mathematical Marvel
 An Introduction to Measure Theory

An easy way to teach kids programming with guidance of teachers and parents. Our children carry far more immense mental abilities than we think. Just to reveal and explore them, we need to know the tools and methodologies. "I had been observing some inspiring attempts that are aiming to teach programming to children. However the thought of "I am a father and why doesn't my son learn programming?" endorsed my soul. Initially, I would think that it was early for him. But on what circumstances? We are discussing the children who catch tens of movements in the games and make decisions (I have to admit I cannot do that) in split of a second over a TabletPC in their hands. It wasn't early for him, it was late indeed. My child could have started learning programming because they had that mental capability. The missing piece in the puzzle is to introduce the appropriate tools with them. First of all, call it as programming, coding or whatever, it is one of the best application methods of mathematics. Just like application of real life. It is the life itself. Whether you like or not, math is a part of your life. Even the sentence of "Can I buy a kilogram of apple?" includes math. Programming is a way of application of math and it is one of the best ones. Because, it includes, problem solving, thinking with multi-dimensions, observing and testing results, getting excited and loving your creation, being proud once you complete; devoting for better, organizing your work, putting your best for your best... In a nutshell it includes many things among life. In other words, just like maths, programming is also an essential part of the life. While we are making a plan for a vacation, we are making a program and utilizing programming algorithms for our journey. While we are organizing a wedding event, we would be using a programming algorithm set. During studying to an exam, we are using a likely approach for programming; just like the moments of planning a meeting with a friend, driving the marketing for a product and within all the planning of a meal; and we apply those approaches to our life. The lack we don't do is to convert those approaches into programming. If we plan well, we enjoy a beautiful vacation, a happy wedding, a good get-together with a friend, we achieve highs sales with a good marketing plan, a successful exam result. That is what programming is. Programming defines how we manage our life. It is a part of our daily life. Whether we like it or not. Even if we are not making professional coding (programming), we are making programming in our professions and think like a programmer. If you are a good programmer, your program consumes less resource and you become successful in what your business. In a nutshell, programming is not an optional occurrence, in life it is the life itself. We all make programming but we create their codes differently. The biggest achievement in teaching children about how programming is done, is to enable them figure those type of life skills and background with fun and swiftness. Pushing aside all the coding techniques, contemplating over the programming and solution ways for the programming is a practice of programming and we benefit from it in every part of the life. The rest is the technicality to convert them into codes. There are so many programming languages to do that and all we have to do is to learn the syntax. Thinking all the possibilities and alternates and figuring out the most efficient is a practice of life just like in programming. I decided to channel my 30 year know-how and expertise into teaching children how to program. For that objective "Where shall we start?", "How can we make it lovable?", "What tools should we use to teach and practice the programming?" "How old should we make it start?" "What is the best methodology?" I chased the answers of questions like the ones above. While experimenting on that, my son helped me a lot. I noticed his approach and comments. I observed the other children's approach. With an honest wish to motivate and help all the children, teachers and parents... 1. Computers 2. A Brief Overview to Blockly Platform 3. A Brief Overview to Scratch Platform 4. Algorithms 5. Loops 6. Conditional Clauses 7. Functions and Procedures 8. Creating Shapes and Graphics 9. Variables 10. Lists and Arrays 11. Objects - Object Oriented Programming

An introduction to category theory as a rigorous, flexible, and coherent modeling language that can be used across the sciences. Category theory was invented in the 1940s to unify and synthesize different areas in mathematics, and it has proven remarkably successful in enabling powerful communication between disparate fields and subfields within mathematics. This book shows that category theory can be useful outside of mathematics as a rigorous, flexible, and coherent modeling language throughout the sciences. Information is inherently dynamic; the same ideas can be organized and reorganized in countless ways, and the ability to translate between such organizational structures is becoming increasingly important in the sciences. Category theory offers a unifying framework for information modeling that can facilitate the translation of knowledge between disciplines. Written in an engaging and straightforward style, and assuming little background in mathematics, the book is rigorous but accessible to non-mathematicians. Using databases as an entry to category theory, it begins with sets and functions, then introduces the reader to notions that are fundamental in mathematics: monoids, groups, orders, and graphs—categories in disguise. After explaining the "big three" concepts of category theory—categories, functors, and natural transformations—the book covers other topics, including limits, colimits, functor categories, sheaves, monads, and operads. The book explains category theory by examples and exercises rather than focusing on theorems and proofs. It includes more than 300 exercises, with solutions. Category Theory for the Sciences is intended to create a bridge between the vast array of mathematical concepts used by mathematicians and the models and frameworks of such scientific disciplines as computation, neuroscience, and physics.

A textbook on projective geometry that emphasises applications in modern information and communication science.

"Witty, compelling, and just plain fun to read . . ." —Evelyn Lamb, *Scientific American* *The Freakonomics of math—a math-world superstar unveils the hidden beauty and logic of the world and puts its power in our hands* The math we learn in school can seem like a dull set of rules, laid down by the ancients and not to be questioned. In *How Not to Be Wrong*, Jordan Ellenberg shows us how terribly limiting this view is: Math isn't confined to abstract incidents that never occur in real life, but rather touches everything we do—the whole world is shot through with it. Math allows us to see the hidden structures underneath the messy and chaotic surface of our world. It's a science of not being wrong, hammered out by centuries of hard work and argument. Armed with the tools of mathematics, we can see through to the true meaning of information we take for granted: How early should you get to the airport? What does "public opinion" really represent? Why do tall parents have shorter children? Who really won Florida in 2000? And how likely are you, really, to develop cancer? *How Not to Be Wrong* presents the surprising revelations behind all of these questions and many more, using the mathematician's method of analyzing life and exposing the hard-won insights of the academic community to the layman—minus the jargon. Ellenberg chases mathematical threads through a vast range of time and space, from the everyday to the cosmic, encountering, among other things, baseball, Reaganomics, daring lottery schemes, Voltaire, the replicability crisis in psychology, Italian Renaissance painting, artificial languages, the development of non-Euclidean geometry, the coming obesity apocalypse, Antonin Scalia's views on crime and punishment, the psychology of slime molds, what Facebook can and can't figure out about you, and the existence of God. Ellenberg pulls from history as well as from the latest theoretical developments to provide those not trained in math with the knowledge they need. Math, as Ellenberg says, is "an atomic-powered prosthesis that you attach to your common sense, vastly multiplying its reach and strength." With the tools of mathematics in hand, you can understand the world in a deeper, more meaningful way. *How Not to Be Wrong* will show you how.

Vectors, Matrices, and Least Squares

Kids can code! For everyone 4+

Interdisciplinary Mathematics Education

Perfect ICT Every Lesson

Popular Science

TASC For Dummies

Backpacker brings the outdoors straight to the reader's doorstep, inspiring and enabling them to go more places and enjoy nature more often. The authority on active adventure, Backpacker is the world's first GPS-enabled magazine, and the only magazine whose editors personally test the hiking trails, camping gear, and survival tips they publish. Backpacker's Editors' Choice Awards, an industry honor recognizing design, feature and product innovation, has become the gold standard against which all other outdoor-industry awards are measured.

Gilbert Strang's clear, direct style and detailed, intensive explanations make this textbook ideal as both a course companion and for self-study. Single variable and multivariable calculus are covered in depth. Key examples of the application of calculus to areas such as physics, engineering and economics are included in order to enhance students' understanding. New to the third edition is a chapter on the 'Highlights of calculus', which accompanies the popular video lectures by the author on MIT's OpenCourseWare. These can be accessed from math.mit.edu/~gs.

Essential Mathematics for Games and Interactive Applications, 2nd edition presents the core mathematics necessary for sophisticated 3D graphics and interactive physical simulations. The book begins with linear algebra and matrix multiplication and expands on this foundation to cover such topics as color and lighting, interpolation, animation and basic game physics. Essential Mathematics focuses on the issues of 3D game development important to programmers and includes optimization guidance throughout. The new edition Windows code will now use Visual Studio.NET. There will also be DirectX support provided, along with OpenGL - due to its cross-platform nature. Programmers will find more concrete examples included in this edition, as well as additional information on tuning, optimization and robustness. The book has a companion CD-ROM with exercises and a test bank for the academic secondary market, and for main market: code examples built around a shared code base, including a math library covering all the topics presented in the book, a core vector/matrix math engine, and libraries to support basic 3D rendering and interaction.

This updated manual presents computer science test takers with Three AP practice tests for the Level A course, including a diagnostic test Charts detailing the topics for each test question All test questions answered and explained A subject review covers static variables, the List interface, Integer, MAX_VALUE, and Integer, MIN_VALUE. The practice exams contain several new questions on two-dimensional arrays and reflect the new free-response style used on the 2012 AP exam. This manual comes with a CD-ROM that has two more model AP exams with answers, explanations, automatic scoring for multiple-choice questions, and a scoring chart. BONUS ONLINE PRACTICE TEST: Students who purchase this book or package will also get FREE access to one additional full-length online AP Computer Science A test with all questions answered and explained. System Requirements: This program will run on a PC with: 2.33GHz or faster x86-compatible processor, or Intel® Atom, 1.6GHz or faster processor for netbooks Microsoft® Windows® Server 2008, Windows Vista® Home Premium, Business, Ultimate, or Enterprise (including 64 bit editions) with Service Pack 2, Windows 7, or Windows 8 Classic 512MB of RAM (1GB of RAM recommended) This program will run on a Mac® with: Intel Core®, 1.83GHz or faster processor Mac OS X v10.6, v10.7, v10.8, or v10.9 512MB of RAM (1GB of RAM recommended)

A practical guide using Processing

Mathematics Learning in Early Childhood

Science, Music, And Mathematics: The Deepest Connections

From Foundations to Applications

A Guide to Building Information Modeling for Owners, Designers, Engineers, Contractors, and Facility Managers

Generative Art

This text promotes student engagement with the beautiful ideas of geometry. Every major concept is introduced in its historical context and connects the idea with real-life. A system of experimentation followed by rigorous explanation and proof is central. Exploratory projects play an integral role in this text. Students develop a better sense of how to prove a result and visualize connections between statements, making these connections real. They develop the intuition needed to conjecture a theorem and devise a proof of what they have observed.

Everything you need to succeed on the GED Test, plus a bonus mobile app for on-the-go study and practice! Prepare to do your best on the GED Test! Get the review and practice materials you need to take – and slay – the exam with confidence. GED Test 2022/2023 For Dummies with Online Practice provides an in-depth overview and deep content review for all test sections. You'll be able to answer GED practice questions for each subject area, plus you'll have access to two complete practice exams in the book and in the companion mobile app! Get ready to succeed on test day and get on your way to achieving your goals with this GED study guide that shares test-taking strategies for all the subjects covered on the exam. You'll find clear information for hands-on learning. GED Test 2022/2023 For Dummies with Online Practice supports you in meeting your goals. This easy-to-use guide can help you get a higher score and earn your GED. Improve grammar and punctuation skills Get comfortable with the types of reading passages on the test Gain confidence in solving math and science problems Study for Mathematical Reasoning, Social Studies, Science, and Reasoning Through Language Arts questions The book also connects you to the GED Test 2022/2023 For Dummies with Online Practice mobile app with two practice tests. Whether you're using the app or the book, you'll have GED practice for passing the four subject exams, which cover Math, Language Arts, Science, and Social Studies.

Popular Science gives our readers the information and tools to improve their technology and their world. The core belief that Popular Science and our readers share: The future is going to be better, and science and technology are the driving forces that will help make it better.

College Algebra provides a comprehensive exploration of algebraic principles and meets scope and sequence requirements for a typical introductory algebra course. The modular approach and richness of content ensure that the book meets the needs of a variety of courses.

College Algebra offers a wealth of examples with detailed, conceptual explanations, building a strong foundation in the material before asking students to apply what they've learned. Coverage and Scope In determining the concepts, skills, and topics to cover, we engaged dozens of highly experienced instructors with a range of student audiences. The resulting scope and sequence proceeds logically while allowing for a significant amount of flexibility in instruction. Chapters 1 and 2 provide both a review and foundation for study of Functions that begins in Chapter 3. The authors recognize that while some institutions may find this material a prerequisite, other institutions have told us that they have a cohort that need the prerequisite skills built into the course. Chapter 1: Prerequisites Chapter 2: Equations and Inequalities Chapters 3-6: The Algebraic Functions Chapter 3: Functions Chapter 4: Linear Functions Chapter 5: Polynomial and Rational Functions Chapter 6: Exponential and Logarithm Functions Chapters 7-9: Further Study in College Algebra Chapter 7: Systems of

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