

Pixel Non Calculator Maths November 2014

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Introduction to Programming Using Java David Eck 2009-09 This is a free, on-line textbook on introductory programming using Java. This book is directed mainly towards beginning programmers, although it might also be useful for experienced programmers who want to learn more about Java. It is an introductory text and does not provide complete coverage of the Java language. The text is a PDF and is suitable for printing or on-screen reading. It contains internal links for navigation and external links to source code files, exercise solutions, and other resources. Contents: 1) Overview: The Mental Landscape. 2) Programming in the Small I: Names and Things. 3) Programming in the Small II: Control. 4) Programming in the Large I: Subroutines. 5) Programming in the Large II: Objects and Classes. 6) Introduction to GUI Programming. 7) Arrays. 8) Correctness and Robustness. 9) Linked Data Structures and Recursion. 10) Generic Programming and Collection Classes. 11) Files and Networking. 12) Advanced GUI Programming. Appendices: Source Code for All Examples in this Book, and News and Errata.

Algebra and Trigonometry Jay P. Abramson 2015-02-13 "The text is suitable for a typical introductory algebra course, and was developed to be used flexibly. While the breadth of topics may go beyond what an instructor would cover, the modular approach and the richness of content ensures that the book meets the needs of a variety of programs."--Page 1.

AP Calculus AB Prep Plus 2020 & 2021 Kaplan Test Prep 2020-02-04 Kaplan's AP Calculus AB Prep Plus 2020 & 2021 is revised to align with the

2020 exam changes. This edition features 1,000 practice questions, 8 full-length practice tests, complete explanations for every question, pre-chapter assessments to help you review efficiently, and a concise review of the most-tested content to quickly build your skills and confidence. With bite-sized, test-like practice sets, expert strategies, and customizable study plans, our guide fits your schedule whether you need targeted prep or comprehensive review. We're so confident that Calculus AB Prep Plus offers the guidance you need that we guarantee it: after studying with our online resources and book, you'll score higher on the exam—or you'll get your money back. To access your online resources, go to kaptest.com/moreonline and follow the directions. You'll need your book handy to complete the process. Personalized Prep. Realistic Practice. 8 full-length Kaplan practice exams with comprehensive explanations and an online test scoring tool to convert your raw score into a 1–5 scaled score Pre- and post-quizzes in each chapter so you can monitor your progress and study exactly what you need Customizable study plans tailored to your individual goals and prep time Online quizzes and workshops for additional practice Focused content review on the essential concepts to help you make the most of your study time Test-taking strategies designed specifically for AP Calculus AB Expert Guidance We know the test—our AP experts make sure our practice questions and study materials are true to the exam. We know students—every explanation is written to help you learn, and our tips on the exam structure and question formats will help you avoid surprises on Test Day. We invented test prep—Kaplan

(kaptest.com) has been helping students for 80 years, and 9 out of 10 Kaplan students get into one or more of their top-choice colleges.

Information Theory, Inference and Learning Algorithms David J. C. MacKay 2003-09-25

Information theory and inference, taught together in this exciting textbook, lie at the heart of many important areas of modern technology - communication, signal processing, data mining, machine learning, pattern recognition, computational neuroscience, bioinformatics and cryptography. The book introduces theory in tandem with applications. Information theory is taught alongside practical communication systems such as arithmetic coding for data compression and sparse-graph codes for error-correction. Inference techniques, including message-passing algorithms, Monte Carlo methods and variational approximations, are developed alongside applications to clustering, convolutional codes, independent component analysis, and neural networks. Uniquely, the book covers state-of-the-art error-correcting codes, including low-density-parity-check codes, turbo codes, and digital fountain codes - the twenty-first-century standards for satellite communications, disk drives, and data broadcast. Richly illustrated, filled with worked examples and over 400 exercises, some with detailed solutions, the book is ideal for self-learning, and for undergraduate or graduate courses. It also provides an unparalleled entry point for professionals in areas as diverse as computational biology, financial engineering and machine learning.

[The Book of R](#) Tilman M. Davies 2016-07-16 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. *Sage for Undergraduates* Gregory V. Bard 2015-02-16 As the open-source and free competitor to expensive software like Maple™, Mathematica®, Magma, and MATLAB®, Sage offers anyone with access to a web browser the ability to use cutting-edge mathematical software and display his or her results for others, often with stunning graphics. This book is a gentle introduction to Sage for undergraduate students toward the end of Calculus II (single-variable integral calculus) or higher-level course work such as Multivariate Calculus, Differential Equations, Linear Algebra, or Math Modeling. The book assumes no background in computer science, but the reader who finishes the book will have learned about half of a first semester Computer Science I course, including large parts of the Python programming language. The audience of the book is not only math majors, but also physics, engineering, finance, statistics, chemistry, and computer science majors.

Applied Stochastic Differential Equations

Simo Särkkä 2019-05-02 With this hands-on introduction readers will learn what SDEs are all about and how they should use them in practice.

The Death of Expertise Tom Nichols

2017-02-01 Technology and increasing levels of education have exposed people to more information than ever before. These societal gains, however, have also helped fuel a surge in narcissistic and misguided intellectual egalitarianism that has crippled informed

debates on any number of issues. Today, everyone knows everything: with only a quick trip through WebMD or Wikipedia, average citizens believe themselves to be on an equal intellectual footing with doctors and diplomats. All voices, even the most ridiculous, demand to be taken with equal seriousness, and any claim to the contrary is dismissed as undemocratic elitism. Tom Nichols' *The Death of Expertise* shows how this rejection of experts has occurred: the openness of the internet, the emergence of a customer satisfaction model in higher education, and the transformation of the news industry into a 24-hour entertainment machine, among other reasons. Paradoxically, the increasingly democratic dissemination of information, rather than producing an educated public, has instead created an army of ill-informed and angry citizens who denounce intellectual achievement. When ordinary citizens believe that no one knows more than anyone else, democratic institutions themselves are in danger of falling either to populism or to technocracy or, in the worst case, a combination of both. An update to the 2017 breakout hit, the paperback edition of *The Death of Expertise* provides a new foreword to cover the alarming exacerbation of these trends in the aftermath of Donald Trump's election. Judging from events on the ground since it first published, *The Death of Expertise* issues a warning about the stability and survival of modern democracy in the Information Age that is even more important today.

GCSE Mathematics for OCR Higher

Homework Book Nick Asker 2015-06-18 A new series of bespoke, full-coverage resources developed for the 2015 GCSE Mathematics qualifications. Endorsed for the OCR J560 GCSE Mathematics Higher tier specification for first teaching from 2015, our Homework Book is an ideal companion to the OCR Higher tier Student Book and can be used as a standalone resource. With exercises that correspond to each section of the Student Book, it offers a wealth of additional questions for practice and consolidation. Our Homework Books contain a breadth and depth of questions covering a variety of skills, including problem-solving and mathematical reasoning, as well as extensive drill questions. Answers to all questions are available free on the Cambridge University Press UK Schools website.

TI-Nspire For Dummies Jeff McCalla 2011-05-09 The updated guide to the newest graphing calculator from Texas Instruments The TI-Nspire graphing calculator is popular among high school and college students as a valuable tool for calculus, AP calculus, and college-level algebra courses. Its use is allowed on the major college entrance exams. This book is a nuts-and-bolts guide to working with the TI-Nspire, providing everything you need to get up and running and helping you get the most out of this high-powered math tool. Texas Instruments' TI-Nspire graphing calculator is perfect for high school and college students in advanced algebra and calculus classes as well as students taking the SAT, PSAT, and ACT exams This fully updated guide covers all enhancements to the TI-Nspire, including the touchpad and the updated software that can be purchased along with the device Shows how to get maximum value from this versatile math tool With updated screenshots and examples, *TI-Nspire For Dummies* provides practical, hands-on instruction to help students make the most of this revolutionary graphing calculator.

Who Built the Moon? Christopher Knight 2014-03-11 The authors of *Civilization One* return, bringing new evidence about the Moon that will shake up our world. Christopher Knight and Alan Butler realized that the ancient system of geometry they presented in their earlier, breakthrough study works as perfectly for the Moon as it does the Earth. On further investigation, they found a consistent sequence of beautiful integer numbers when looking at every major aspect of the Moon--no such pattern emerges for any other planet or moon in the solar system. In addition, Knight and Butler discovered that the Moon possesses few or no heavy metals and has no core—something that should not be possible. Their persuasive conclusion: if higher life only developed on Earth because the Moon is exactly what it is and where it is, it becomes unreasonable to cling to the idea that the Moon is a natural object. The only question that remains is, who built it?

1001 Math Problems LearningExpress LLC 2013 1001 math problems will teach you how to: master core concepts to prepare for important exams, learn math rules and how to apply them to problems, learn math skills you can apply when solving problems at all levels, and

overcome math anxiety through skills reinforcement and focused practice.

How Many Seeds in a Pumpkin? (Mr. Tiffin's Classroom Series) Margaret McNamara

2010-09-15 Carve out family time with this Halloween read that features the beloved Mr. Tiffin and his students and makes for a fun way to reinforce counting skills at home! This book makes a wonderful read-aloud companion to any math or science curriculum, and it's a fun way to reinforce topics like skip counting and estimation in a fun pumpkin-themed classroom experiment! "How many seeds are in a pumpkin?" Mr. Tiffin asks his class as they gather around the big, medium, and small pumpkins on his desk. Robert, the biggest kid, guesses that the largest one has a million seeds; Elinor, sounding like she knows what she's talking about, guesses the medium one has 500 seeds; and Anna, who likes even numbers better than odd ones, guesses that the little one has 22. Charlie, the smallest boy in the class, doesn't have a guess. Counting pumpkin seeds is messy business, but once the slimy job is done, to everyone's surprise, the smallest pumpkin has the most seeds! As Charlie happily exclaims, "Small things have a lot going on inside of them." And don't miss the newest addition to the Mr. Tiffin series, The Dinosaur Expert!

Human Compatible Stuart Russell 2019 A leading artificial intelligence researcher lays out a new approach to AI that will enable people to coexist successfully with increasingly intelligent machines.

The Principles of Beautiful Web Design Jason Beaird 2010-11-28 This second edition of The Principles of Beautiful Web Design is the ideal book for people who can build websites, but are seeking the skills and knowledge to visually enhance their sites. This book will teach you how to: Understand the process of what makes "good design," from discovery through to implementation Use color effectively, develop color schemes, and create a palette Create pleasing layouts using grids, the rule of thirds, and symmetry Employ textures: lines, points, shapes, volumes, and depth Apply typography to make ordinary designs look great Choose, edit, and position effective imagery And lots more... This revised, easy-to-follow guide is illustrated with beautiful, full-color examples, and leads

readers through the process of creating great designs from start to finish. It also features: Updated information about grid-based design How to design for mobile resolutions Information about the future of web fonts including @font-face Common user-interface patterns and resources

Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results (rev. Ed.) Barry N. Taylor 2009-11 Results of measurements and conclusions derived from them constitute much of the technical information produced by the National Institute of Standards and Technology (NIST). In July 1992 the Director of NIST appointed an Ad Hoc Committee on Uncertainty Statements and charged it with recommending a policy on this important topic. The Committee concluded that the CIPM approach could be used to provide quantitative expression of measurement that would satisfy NIST's customers' requirements. NIST initially published a Technical Note on this issue in Jan. 1993. This 1994 edition addresses the most important questions raised by recipients concerning some of the points it addressed and some it did not. Illustrations.

Real-Time Rendering Tomas Akenine-Möller 2019-01-18 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

Dealers of Lightning Michael A. Hiltzik 2009-05-19 In the bestselling tradition of *The Soul of a New Machine*, *Dealers of Lightning* is a fascinating journey of intellectual creation. In the 1970s and '80s, Xerox Corporation brought together a brain-trust of engineering geniuses, a group of computer eccentrics dubbed PARC. This brilliant group created several monumental innovations that triggered a technological revolution, including the first personal computer, the laser printer, and the graphical interface (one of the main precursors of the Internet), only to see these breakthroughs rejected by the corporation. Yet, instead of giving up, these determined inventors turned their ideas into empires that radically altered contemporary life and changed the world. Based on extensive interviews with the scientists, engineers, administrators, and executives who lived the story, this riveting chronicle details PARC's humble beginnings through its triumph as a hothouse for ideas, and shows why Xerox was never able to grasp, and ultimately exploit, the cutting-edge innovations PARC delivered. *Dealers of Lightning* offers an unprecedented look at the ideas, the inventions, and the individuals that propelled Xerox PARC to the frontier of technohistory--and the corporate machinations that almost prevented it from achieving greatness.

Introduction to 3D Game Programming with DirectX 9.0c Frank Luna 2006-06-07 *Introduction to 3D Game Programming with DirectX 9.0c: A Shader Approach* presents an introduction to programming interactive computer graphics, with an emphasis on game development, using real-time shaders with DirectX 9.0. The book is divided into three parts that explain basic mathematical and 3D concepts, show how to describe 3D worlds and implement fundamental 3D rendering

techniques, and demonstrate the application of Direct3D to create a variety of special effects. With this book understand basic mathematical tools used in video game creation such as vectors, matrices, and transformations; discover how to describe and draw interactive 3D scenes using Direct3D and the D3DX library; learn how to implement lighting, texture mapping, alpha blending, and stenciling using shaders and the high-level shading language (HLSL); explore a variety of techniques for creating special effects, including vertex blending, character animation, terrain rendering, multi-texturing, particle systems, reflections, shadows, and normal mapping; find out how to work with meshes, load and render .X files, program terrain/camera collision detection, and implement 3D object picking; review key ideas, gain programming experience, and explore new topics with the end-of-chapter exercises.

The R Book Michael J. Crawley 2007-06-13 The high-level language of R is recognized as one of the most powerful and flexible statistical software environments, and is rapidly becoming the standard setting for quantitative analysis, statistics and graphics. R provides free access to unrivalled coverage and cutting-edge applications, enabling the user to apply numerous statistical methods ranging from simple regression to time series or multivariate analysis. Building on the success of the author's bestselling *Statistics: An Introduction using R*, *The R Book* is packed with worked examples, providing an all inclusive guide to R, ideal for novice and more accomplished users alike. The book assumes no background in statistics or computing and introduces the advantages of the R environment, detailing its applications in a wide range of disciplines. Provides the first comprehensive reference manual for the R language, including practical guidance and full coverage of the graphics facilities. Introduces all the statistical models covered by R, beginning with simple classical tests such as chi-square and t-test. Proceeds to examine more advance methods, from regression and analysis of variance, through to generalized linear models, generalized mixed models, time series, spatial statistics, multivariate statistics and much more. The R Book is aimed at undergraduates, postgraduates and professionals in science,

engineering and medicine. It is also ideal for students and professionals in statistics, economics, geography and the social sciences.

Ti 84 Plus Calculator Speedy Publishing
2014-08-21 Texas Instruments has upgraded its TI-83 calculator to meet the needs of the ever changing high school curriculum. With its high resolution screen and app capability, the TI-84 Plus offers the user a variety of upgrades to make the calculating experience more practical, more readable, and overall more enjoyable. This calculator has all of the familiar functions of the TI-83 model, but allows the user more memory and cleaner graphs. In addition, the TI-84 Plus has the capability to be connected to other calculators, computers, or to be projected onto a screen for presentations. Overall, this powerful calculator is an essential tool for high school math class.

Hooked Nir Eyal 2014-11-04 Revised and Updated, Featuring a New Case Study How do successful companies create products people can't put down? Why do some products capture widespread attention while others flop? What makes us engage with certain products out of sheer habit? Is there a pattern underlying how technologies hook us? Nir Eyal answers these questions (and many more) by explaining the Hook Model—a four-step process embedded into the products of many successful companies to subtly encourage customer behavior. Through consecutive “hook cycles,” these products reach their ultimate goal of bringing users back again and again without depending on costly advertising or aggressive messaging. Hooked is based on Eyal's years of research, consulting, and practical experience. He wrote the book he wished had been available to him as a start-up founder—not abstract theory, but a how-to guide for building better products. Hooked is written for product managers, designers, marketers, start-up founders, and anyone who seeks to understand how products influence our behavior. Eyal provides readers with:

- Practical insights to create user habits that stick.
- Actionable steps for building products people love.
- Fascinating examples from the iPhone to Twitter, Pinterest to the Bible App, and many other habit-forming products.

Quantitative Nuclear Medicine Imaging
International Atomic Energy Agency 2014 This

publication reviews the current state of the art of image quantification and provides a solid background of tools and methods to medical physicists and other related professionals who are faced with quantification of radionuclide distribution in clinical practice. It describes and analyses the physical effects that degrade image quality and affect the accuracy of quantification, and describes methods to compensate for them in planar, single-photon emission computed tomography (SPECT) and positron emission tomography (PET) images.

About Face Alan Cooper 2014-09-02 The essential interaction design guide, fully revised and updated for the mobile age About Face: The Essentials of Interaction Design, Fourth Edition is the latest update to the book that shaped and evolved the landscape of interaction design. This comprehensive guide takes the worldwide shift to smartphones and tablets into account. New information includes discussions on mobile apps, touch interfaces, screen size considerations, and more. The new full-color interior and unique layout better illustrate modern design concepts. The interaction design profession is blooming with the success of design-intensive companies, priming customers to expect "design" as a critical ingredient of marketplace success. Consumers have little tolerance for websites, apps, and devices that don't live up to their expectations, and the responding shift in business philosophy has become widespread. About Face is the book that brought interaction design out of the research labs and into the everyday lexicon, and the updated Fourth Edition continues to lead the way with ideas and methods relevant to today's design practitioners and developers. Updated information includes: Contemporary interface, interaction, and product design methods Design for mobile platforms and consumer electronics State-of-the-art interface recommendations and up-to-date examples Updated Goal-Directed Design methodology Designers and developers looking to remain relevant through the current shift in consumer technology habits will find About Face to be a comprehensive, essential resource.

Web Programming with HTML5, CSS, and JavaScript John Dean 2018-01-09 Web Programming with HTML5, CSS, and JavaScript is written for the undergraduate, client-side web

programming course. It covers the three client-side technologies (HTML5, CSS, and JavaScript) in depth, with no dependence on server-side technologies.

Practical Astronomy with your Calculator or Spreadsheet Peter Duffett-Smith 2011-05-05 Now in its fourth edition, this highly regarded book is ideal for those who wish to solve a variety of practical and recreational problems in astronomy using a scientific calculator or spreadsheet. Updated and extended, this new edition shows you how to use spreadsheets to predict, with greater accuracy, solar and lunar eclipses, the positions of the planets, and the times of sunrise and sunset. Suitable for worldwide use, this handbook covers orbits, transformations and general celestial phenomena, and is essential for anyone wanting to make astronomical calculations for themselves. With clear, easy-to-follow instructions for use with a pocket calculator, shown alongside worked examples, it can be enjoyed by anyone interested in astronomy, and will be a useful tool for software writers and students studying introductory astronomy. High-precision spreadsheet methods for greater accuracy are available at www.cambridge.org/practicalastronomy.

Getting Started with p5.js Lauren McCarthy 2015-10-12 With p5.js, you can think of your entire Web browser as your canvas for sketching with code! Learn programming the fun way--by sketching with interactive computer graphics! Getting Started with p5.js contains techniques that can be applied to creating games, animations, and interfaces. p5.js is a new interpretation of Processing written in JavaScript that makes it easy to interact with HTML5 objects, including text, input, video, webcam, and sound. Like its older sibling Processing, p5.js makes coding accessible for artists, designers, educators, and beginners. Written by the lead p5.js developer and the founders of Processing, this book provides an introduction to the creative possibilities of today's Web, using JavaScript and HTML. With Getting Started with p5.js, you'll: Quickly learn programming basics, from variables to objects Understand the fundamentals of computer graphics Create interactive graphics with easy-to-follow projects Learn to apply data visualization techniques Capture and manipulate webcam audio and video feeds in the browser

Programming the TI-83 Plus/TI-84 Plus Christopher Mitchell 2012-09-13 Summary Programming the TI-83 Plus/TI-84 Plus is an example-filled, hands-on tutorial that introduces students, teachers, and professional users to programming with the TI-83 Plus and TI-84 Plus graphing calculators. This fun and easy-to-read book immediately immerses you in your first programs and guides you concept-by-concept, example-by-example. You'll learn to think like a programmer as you use the TI-BASIC language to design and write your own utilities, games, and math programs. About the Technology The TI-83 Plus and TI-84 Plus are more than just powerful graphing calculators—they are the perfect place to start learning to program. The TI-BASIC language is built in, so you have everything you need to create your own math and science programs, utilities—even games. About the Book Programming the TI-83 Plus/TI-84 Plus teaches universal programming concepts and makes it easy for students, teachers, and professionals to write programs for the world's most popular graphing calculators. This friendly tutorial guides you concept-by-concept, immediately immersing you in your first programs. It introduces TI-BASIC and z80 assembly, teaches you tricks to slim down and speed up your programs, and gives you a solid conceptual base to explore other programming languages. This book is written for beginners—no programming background is assumed. 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 Works with all models of the TI-83, TI-83+, and TI-84+ Learn to think like a programmer Learn concepts you can apply to any language Advanced concepts such as hybrid BASIC and ASM Table of Contents PART 1 GETTING STARTED WITH PROGRAMMING Diving into calculator programming Communication: basic input and output Conditionals and Boolean logic Control structures Theory interlude: problem solving and debugging PART 2 BECOMING A TI-BASIC MASTER Advanced input and events Pixels and the graphscreen Graphs, shapes, and points Manipulating numbers and data types PART 3 ADVANCED CONCEPTS; WHAT'S NEXT Optimizing TI-BASIC programs Using hybrid TI-BASIC libraries Introducing z80 assembly Now what? Expanding your

programming horizons

A Primer on Scientific Programming with Python

Hans Petter Langtangen 2016-07-28 The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science. From the reviews: Langtangen ... does an excellent job of introducing programming as a set of skills in problem solving. He guides the reader into thinking properly about producing program logic and data structures for modeling real-world problems using objects and functions and embracing the object-oriented paradigm. ... Summing Up: Highly recommended. F. H. Wild III, Choice, Vol. 47 (8), April 2010 Those of us who have learned scientific programming in Python 'on the streets' could be a little jealous of students who have the opportunity to take a course out of Langtangen's Primer." John D. Cook, The Mathematical Association of America, September 2011 This book goes through Python in particular, and programming in general, via tasks that scientists will likely perform. It contains valuable information for students new to scientific computing and would be the perfect bridge between an introduction to programming and an advanced course on numerical methods or computational science. Alex Small, IEEE, CiSE Vol. 14 (2), March /April 2012 "This fourth edition is a wonderful, inclusive textbook that covers pretty much everything one needs to know to go from zero to fairly sophisticated scientific programming in Python..." Joan Horvath, Computing Reviews, March 2015

Teaching AP Calculus Lin McMullin 2002

Actionable Gamification Yu-kai Chou

2019-12-03 Learn all about implementing a good gamification design into your products, workplace, and lifestyle Key Features Explore what makes a game fun and engaging Gain insight into the Octalysis Framework and its applications Discover the potential of the Core Drives of gamification through real-world scenarios Book Description Effective gamification is a combination of game design, game dynamics, user experience, and ROI-driving business implementations. This book explores the interplay between these disciplines and captures the core principles that contribute to a good gamification design. The book starts with an overview of the Octalysis Framework and the 8 Core Drives that can be used to build strategies around the various systems that make games engaging. As the book progresses, each chapter delves deep into a Core Drive, explaining its design and how it should be used. Finally, to apply all the concepts and techniques that you learn throughout, the book contains a brief showcase of using the Octalysis Framework to design a project experience from scratch. After reading this book, you'll have the knowledge and skills to enable the widespread adoption of good gamification and human-focused design in all types of industries. What you will learn Discover ways to use gamification techniques in real-world situations Design fun, engaging, and rewarding experiences with Octalysis Understand what gamification means and how to categorize it Leverage the power of different Core Drives in your applications Explore how Left Brain and Right Brain Core Drives differ in motivation and design methodologies Examine the fascinating intricacies of White Hat and Black Hat Core Drives Who this book is for Anyone who wants to implement gamification principles and techniques into their products, workplace, and lifestyle will find this book useful.

Common Sense Mathematics: Second Edition

Ethan D. Bolker 2021-01-21 Ten years from now, what do you want or expect your students to remember from your course? We realized that in ten years what matters will be how students approach a problem using the tools they carry with them—common sense and common knowledge—not the particular mathematics we

chose for the curriculum. Using our text, students work regularly with real data in moderately complex everyday contexts, using mathematics as a tool and common sense as a guide. The focus is on problems suggested by the news of the day and topics that matter to students, like inflation, credit card debt, and loans. We use search engines, calculators, and spreadsheet programs as tools to reduce drudgery, explore patterns, and get information. Technology is an integral part of today's world—this text helps students use it thoughtfully and wisely. This second edition contains revised chapters and additional sections, updated examples and exercises, and complete rewrites of critical material based on feedback from students and teachers who have used this text. Our focus remains the same: to help students to think carefully—and critically—about numerical information in everyday contexts.

Really Big Numbers Richard Evan Schwartz 2014-06-30 In the American Mathematical Society's first-ever book for kids (and kids at heart), mathematician and author Richard Evan Schwartz leads math lovers of all ages on an innovative and strikingly illustrated journey through the infinite number system. By means of engaging, imaginative visuals and endearing narration, Schwartz manages the monumental task of presenting the complex concept of Big Numbers in fresh and relatable ways. The book begins with small, easily observable numbers before building up to truly gigantic ones, like a nonillion, a tredecillion, a googol, and even ones too huge for names! Any person, regardless of age, can benefit from reading this book. Readers will find themselves returning to its pages for a very long time, perpetually learning from and growing with the narrative as their knowledge deepens. Really Big Numbers is a wonderful enrichment for any math education program and is enthusiastically recommended to every teacher, parent and grandparent, student, child, or other individual interested in exploring the vast universe of numbers.

[PISA 2018 Assessment and Analytical Framework](#) OECD 2019-04-26 This report presents the conceptual foundations of the OECD Programme for International Student Assessment (PISA), now in its seventh cycle of comprehensive and rigorous international surveys of student

knowledge, skills and well-being. Like previous cycles, the 2018 assessment covered reading, mathematics and science, with the major focus this cycle on reading literacy, plus an evaluation of students' global competence – their ability to understand and appreciate the perspectives and world views of others. Financial literacy was also offered as an optional assessment.

Why Forests? Why Now? Frances Seymour 2016-12-27 Tropical forests are an undervalued asset in meeting the greatest global challenges of our time—averting climate change and promoting development. Despite their importance, tropical forests and their ecosystems are being destroyed at a high and even increasing rate in most forest-rich countries. The good news is that the science, economics, and politics are aligned to support a major international effort over the next five years to reverse tropical deforestation. *Why Forests? Why Now?* synthesizes the latest evidence on the importance of tropical forests in a way that is accessible to anyone interested in climate change and development and to readers already familiar with the problem of deforestation. It makes the case to decisionmakers in rich countries that rewarding developing countries for protecting their forests is urgent, affordable, and achievable.

College Algebra Jay Abramson 2018-01-07 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 Equations and Inequalities Chapter 8: Analytic Geometry Chapter 9: Sequences, Probability and Counting Theory

New Perspectives on Computer Concepts 2014: Comprehensive June Jamrich Parsons 2014-02-01 Go beyond computing basics with the award-winning NEW PERSPECTIVES ON COMPUTER CONCEPTS. Designed to get you up-to-speed on essential computer literacy skills, this market leading text goes deeper, providing technical and practical information relevant to everyday life. NEW PERSPECTIVES ON COMPUTER CONCEPTS 2014 incorporates significant technology trends that affect computing and everyday life; such as concerns for data security, personal privacy, online safety, controversy over digital rights management, interest in open source software and portable applications, and more. In addition, coverage of Microsoft Windows 8 and Office 2013 will introduce you to the exciting new features of Microsoft's next generation of software.

Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Inversions Scott Kim 1996 Word Designs Demonstrate Symmetry Introduce your students to the basic concepts of symmetry with more than 60 mind-boggling lettering designs by Scott Kim, whom Isaac Asimov called "the Escher of the alphabet." Each word in Inversions exhibits striking geometrical symmetry. For instance, the word mirror is written with reflectional symmetry; symmetry reads the same upside down; and infinity spirals off to infinity. The accompanying essays connect mathematics and symmetry with art, psychology, and music. One of the sections shows students how to create their own inversions.

The Age of Em Robin Hanson 2016-05-13 Robots may one day rule the world, but what is a robot-ruled Earth like? Many think the first truly smart robots will be brain emulations or ems.

Scan a human brain, then run a model with the same connections on a fast computer, and you have a robot brain, but recognizably human. Train an em to do some job and copy it a million times: an army of workers is at your disposal. When they can be made cheaply, within perhaps a century, ems will displace humans in most jobs. In this new economic era, the world economy may double in size every few weeks. Some say we can't know the future, especially following such a disruptive new technology, but Professor Robin Hanson sets out to prove them wrong. Applying decades of expertise in physics, computer science, and economics, he uses standard theories to paint a detailed picture of a world dominated by ems. While human lives don't change greatly in the em era, em lives are as different from ours as our lives are from those of our farmer and forager ancestors. EmS make us question common assumptions of moral progress, because they reject many of the values we hold dear. Read about em mind speeds, body sizes, job training and career paths, energy use and cooling infrastructure, virtual reality, aging and retirement, death and immortality, security, wealth inequality, religion, teleportation, identity, cities, politics, law, war, status, friendship and love. This book shows you just how strange your descendants may be, though ems are no stranger than we would appear to our ancestors. To most ems, it seems good to be an em.

Software-Defined Radio for Engineers

Alexander M. Wyglinski 2018-04-30 Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization

message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox

with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.