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This new reference book is a comprehensive guide to using fonts and typography on the Web and across a variety of operating systems and application software.

R is the most powerful tool you can use for statistical analysis. This definitive guide smooths R's steep learning curve with practical solutions and real-world applications for commercial environments.

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In R in Action, Third Edition you will learn how to: Set up and install R and RStudio Clean, manage, and analyze data with R Use the ggplot2 package for graphs and visualizations Solve data management problems using R functions Fit and interpret regression models Test hypotheses and estimate confidence Simplify complex multivariate data with principal components and exploratory factor analysis Make predictions using time series forecasting Create dynamic reports and stunning visualizations Techniques for debugging

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programs and creating packages R in Action, Third Edition makes learning R quick and easy. That's why thousands of data scientists have chosen this guide to help them master the powerful language. Far from being a dry academic tome, every example you'll encounter in this book is relevant to scientific and business developers, and helps you solve common data challenges. R expert Rob Kabacoff takes you on a crash course in statistics, from dealing with messy and incomplete data to creating stunning visualizations.

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This revised and expanded third edition contains fresh coverage of the new tidyverse approach to data analysis and R's state-of-the-art graphing capabilities with the ggplot2 package. About the technology Used daily by data scientists, researchers, and quants of all types, R is the gold standard for statistical data analysis. This free and open source language includes packages for everything from advanced data visualization to deep learning. Instantly comfortable for mathematically minded users, R easily handles practical

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problems without forcing you to think like a software engineer. About the book R in Action, Third Edition teaches you how to do statistical analysis and data visualization using R and its popular tidyverse packages. In it, you'll investigate real-world data challenges, including forecasting, data mining, and dynamic report writing. This revised third edition adds new coverage for graphing with ggplot2, along with examples for machine learning topics like clustering, classification, and time series analysis. What's inside Clean, manage, and analyze

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data Use the ggplot2 package for graphs and visualizations Techniques for debugging programs and creating packages A complete learning resource for R and tidyverse About the reader Requires basic math and statistics. No prior experience with R needed. About the author Dr. Robert I Kabacoff is a professor of quantitative analytics at Wesleyan University and a seasoned data scientist with more than 20 years of experience. Table of Contents PART 1 GETTING STARTED 1 Introduction to R 2 Creating a dataset 3 Basic data

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Advanced graphs 20 Advanced programming 21 Creating dynamic reports 22 Creating a package

This book is an introduction to the language and standard proof methods of mathematics. It is a bridge from the computational courses (such as calculus or differential equations) that students typically encounter in their first year of college to a more abstract outlook. It lays a foundation for more theoretical courses such as topology, analysis and abstract algebra. Although it may be more

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meaningful to the student who has had some calculus, there is really no prerequisite other than a measure of mathematical maturity.

Scalable Vector Graphics -- or SVG -- is the new XML-based graphics standard from the W3C that will enable Web documents to be smaller, faster and more interactive. J.

David Eisenberg's insightful book takes you through the ins and outs of SVG, beginning with basics needed to create simple line drawings and then moving through more complicated features like filters,

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transformations, and integration with Java, Perl, and XSLT. Unlike GIFs, JPEGs or PNGs (which are bitmapped), SVG images are both resolution- and device-independent, so that they can scale up or down to fit proportionally into any size display or any Internet device -- from PDAs to large office monitors and high-resolution printers. Smaller than bitmapped files and faster to download, SVG images can be rendered with different CSS styles for each environment. They work well across a range of available bandwidths. SVG makes it possible for

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designers to escape the constant need to update graphics by hand or use custom code to generate bitmap images. And while SVG was created with the Web in mind, the language has a variety of other uses. SVG greatly simplifies tasks like: Creating web sites whose graphics reflect the content of the page, changing automatically if the content changes Generating graphs and charts from information stored in a wide variety of sources Exchanging detailed drawings, from architectural plans to CAD layouts to project management diagrams

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***Creating diagrams that users can explore by zooming in and panning around
Generating bitmap images for use in older browsers using simple automatable templates
Managing graphics that support multiple languages or translations
Creating complex animation
By focusing sharply on the markup at the foundation of SVG, SVG Essentials gives you a solid base on which to create your own custom tools.
Explanations of key technical tools -- like XML, matrix math, and scripting -- are included as appendices, along with a***

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reference to the SVG vocabulary. Whether you're a graphic designer in search of new tools or a programmer dealing with the complex task of creating and managing graphics, SVG Essentials provides you with the means to take advantage of SVG.

***The Unofficial 2012 AMC 10A Solution Guide
The Basics***

***LaTeX & TeX Strategies for Fonts, Graphics,
& More***

R Markdown Cookbook

An Introduction

Notes on Cognitive Aspects of Mathematical

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Practice

LaTeX is the premiere software of choice for writers who need to prepare technical information in a clear and elegant manner. This unique book tells how to use LaTeX or Tex with files prepared with everyday office software such as Lotus or Wordperfect and how to set up software links with Acrobat and hyper-text using LaTeX for Internet communication. Illustrated.

This book is a unique exposition of rich and inspiring geometries associated with Möbius

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transformations of the hypercomplex plane. The presentation is self-contained and based on the structural properties of the group $SL_2(\mathbb{R})$. Starting from elementary facts in group theory, the author unveils surprising new results about the geometry of circles, parabolas and hyperbolas, using an approach based on the Erlangen programme of F Klein, who defined geometry as a study of invariants under a transitive group action. The treatment of elliptic, parabolic and hyperbolic Möbius transformations is provided in a uniform way.

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This is possible due to an appropriate usage of complex, dual and double numbers which represent all non-isomorphic commutative associative two-dimensional algebras with unit. The hypercomplex numbers are in perfect correspondence with the three types of geometries concerned. Furthermore, connections with the physics of Minkowski and Galilean space-time are considered./a

The high-level language of R is recognized as one of the most powerful and flexible statistical software environments, and is

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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

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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

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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.

Quaternionic and Clifford analysis are an extension of complex analysis into higher dimensions. The unique starting point of Wolfgang Sprößig's work was the application

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of quaternionic analysis to elliptic differential equations and boundary value problems. Over the years, Clifford analysis has become a broad-based theory with a variety of applications both inside and outside of mathematics, such as higher-dimensional function theory, algebraic structures, generalized polynomials, applications of elliptic boundary value problems, wavelets, image processing, numerical and discrete analysis. The aim of this volume is to provide an essential overview of modern topics in

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Clifford analysis, presented by specialists in the field, and to honor the valued contributions to Clifford analysis made by Wolfgang Sprößig throughout his career.

TeX Unbound

Introdução ao uso do LaTeX

Understanding data with graphs

Geometry Of Mobius Transformations: Elliptic, Parabolic And Hyperbolic Actions Of $Sl_2(\mathbb{r})$
(With Dvd-rom)

TEX and METAFONT

Programming with Mathematica®

Wissenschaft und TEX TEX wurde vor mehr als 35 Jahren für das Erstellen von Dokumenten im wissenschaftlichen Bereich erstellt. Anfänglich nur für Manuskripte von mathematisch orientierten Büchern geschaffen, wurde das Satzsystem TEX sehr schnell als prädestiniertes System für den gesamten wissenschaftlichen Bereich erkannt. Mit dem neuen TEXCompiler LuaTEX, welcher auf dem traditionellen TEX aufbaut, dem TEX-Format LATEX und den Dokumentenklassen von KOMA – Script lassen sich wissenschaftliche Arbeiten für jeden Bereich und in jeder Sprache erstellen. Die wissenschaftliche Arbeit

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stellt nicht nur besondere Anforderungen an die Art und Weise von Literaturverweisen und der Ausgabe der Bibliografie, sondern auch an typografische Gepflogenheiten. Mit diesem Buch bekommt jeder viele Hinweise für das Erstellen von wissenschaftlichen Arbeiten auf höchstem Niveau.

LaTeX is a free, automated state-of-the-art typesetting system. This book teaches all the ins and outs of LaTeX which are needed to write an article, report, thesis, or book. The book teaches by example, giving many worked out examples showing input and output side by side. The book presents the most recent techniques for presenting

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data plots, complex graphics, and computer presentations, but does not require previous knowledge. However, it is also a reference for the more seasoned user, with pointers to modern techniques and packages. Recurring themes in the book are consistent and effective presentation, planning and development, controlling style and content, and maintenance. Praise for the First Edition: "This outstanding book ... gives the reader robust concepts and implementable knowledge of this environment. Graphical user interface (GUI)-based users and developers do not get short shrift, despite the command-line interface's (CLI) full-power

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treatment. ... Every programmer should read the introduction's Unix/Linux philosophy section. ... This authoritative and exceptionally well-constructed book has my highest recommendation. It will repay careful and recursive study." --Computing Reviews, August 2011 *Mastering Modern Linux, Second Edition* retains much of the good material from the previous edition, with extensive updates and new topics added. The book provides a comprehensive and up-to-date guide to Linux concepts, usage, and programming. The text helps the reader master Linux with a well-selected set of topics, and encourages hands-on practice. The first part of the

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textbook covers interactive use of Linux via the Graphical User Interface (GUI) and the Command-Line Interface (CLI), including comprehensive treatment of the Gnome desktop and the Bash Shell. Using different apps, commands and filters, building pipelines, and matching patterns with regular expressions are major focuses. Next comes Bash scripting, file system structure, organization, and usage. The following chapters present networking, the Internet and the Web, data encryption, basic system admin, as well as Web hosting. The Linux Apache MySQL/MariaDB PHP (LAMP) Web hosting combination is also presented in

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depth. In the last part of the book, attention is turned to C-level programming. Topics covered include the C compiler, preprocessor, debugger, I/O, file manipulation, process control, inter-process communication, and networking. The book includes many examples and complete programs ready to download and run. A summary and exercises of varying degrees of difficulty can be found at the end of each chapter. A companion website (<http://mml.sofpower.com>) provides appendices, information updates, an example code package, and other resources for instructors, as well as students.

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Orbital Mechanics for Engineering Students, Second Edition, provides an introduction to the basic concepts of space mechanics. These include vector kinematics in three dimensions; Newton's laws of motion and gravitation; relative motion; the vector-based solution of the classical two-body problem; derivation of Kepler's equations; orbits in three dimensions; preliminary orbit determination; and orbital maneuvers. The book also covers relative motion and the two-impulse rendezvous problem; interplanetary mission design using patched conics; rigid-body dynamics used to characterize the attitude of a space vehicle; satellite attitude dynamics;

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and the characteristics and design of multi-stage launch vehicles. Each chapter begins with an outline of key concepts and concludes with problems that are based on the material covered. This text is written for undergraduates who are studying orbital mechanics for the first time and have completed courses in physics, dynamics, and mathematics, including differential equations and applied linear algebra. Graduate students, researchers, and experienced practitioners will also find useful review materials in the book. NEW: Reorganized and improved discussions of coordinate systems, new discussion on perturbations and quaternions NEW:

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Increased coverage of attitude dynamics, including new Matlab algorithms and examples in chapter 10 New examples and homework problems

Bayesian Data Analysis, Third Edition

Statistical Analysis and Data Display

Introduction to Aircraft Flight Mechanics

The Art of Problem Solving, Volume 1

Differential Calculus and Stokes' Theorem

The Student's Introduction to MATHEMATICA ®

The Book of R is a comprehensive, beginner-friendly guide to R, the world's most popular programming language for statistical analysis.

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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 ggvis, as

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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

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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. Now in its third edition, this classic book is widely considered the leading text on Bayesian methods, lauded for its accessible, practical approach to analyzing data and solving research problems. Bayesian Data Analysis, Third Edition

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continues to take an applied approach to analysis using up-to-date Bayesian methods. The authors—all leaders in the statistics community—introduce basic concepts from a data-analytic perspective before presenting advanced methods. Throughout the text, numerous worked examples drawn from real applications and research emphasize the use of Bayesian inference in practice. New to the Third Edition Four new chapters on nonparametric modeling Coverage of weakly informative priors and boundary-avoiding priors Updated

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discussion of cross-validation and predictive information criteria Improved convergence monitoring and effective sample size calculations for iterative simulation Presentations of Hamiltonian Monte Carlo, variational Bayes, and expectation propagation New and revised software code The book can be used in three different ways. For undergraduate students, it introduces Bayesian inference starting from first principles. For graduate students, the text presents effective current approaches to Bayesian modeling and

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computation in statistics and related fields. For researchers, it provides an assortment of Bayesian methods in applied statistics.

Additional materials, including data sets used in the examples, solutions to selected exercises, and software instructions, are available on the book's web page.

A quick reference to basic science for anaesthetists, containing all the key information needed for FRCA exams.

Handbook of Open Source Tools introduces a comprehensive collection of advanced open

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source tools useful in developing software applications. The book contains information on more than 200 open-source tools which include software construction utilities for compilers, virtual-machines, database, graphics, high-performance computing, OpenGL, geometry, algebra, graph theory , GUIs and more. Special highlights for software construction utilities and application libraries are included. Each tool is covered in the context of a real like application development setting. This unique handbook presents a comprehensive discussion of

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advanced tools, a valuable asset used by most application developers and programmers; includes a special focus on Mathematical Open Source Software not available in most Open Source Software books, and introduces several tools (eg ACL2, CLIPS, CUDA, and COIN) which are not known outside of select groups, but are very powerful. Handbook of Open Source Tools is designed for application developers and programmers working with Open Source Tools. Advanced-level students concentrating on Engineering, Mathematics and Computer

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Science will find this reference a valuable asset as well.

A Handbook for Precalculus, Calculus, and Linear Algebra

Orbital Mechanics for Engineering Students

Handbook of Open Source Tools

Physics, Pharmacology and Physiology for Anaesthetists

Book of Proof

Mastering Modern Linux

R Markdown is a powerful tool for combining analysis and reporting into the single document in the spirit of

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literate programming and reproducible research. Since the birth of the `rmarkdown` package in early 2014, R Markdown has grown substantially from a package that supports a few output formats (such as HTML, PDF, and Word) to an extensive and diverse ecosystem that enables the creation of books, blogs, scientific articles, websites, and more. Due to its rapid success, this ecosystem is hard to learn completely meaning that R Markdown users, from novices to advanced users, likely do not know all that these packages have to offer. The R Markdown Cookbook confronts this gap by showcasing short, practical examples of wide-ranging tips and tricks to get the most out of these tools. After reading this book, you will learn how to: Enhance your R Markdown

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content with diagrams, citations, and dynamically generated text Streamline your workflow with child documents, code chunk references, and caching Control the formatting and layout with Pandoc markdown syntax or by writing custom HTML and LaTeX templates Utilize chunk options and hooks to fine-tune how your code is processed Switch between different language engines to seamlessly incorporate python, D3, and more into your analysis

Analytic combinatorics aims to enable precise quantitative predictions of the properties of large combinatorial structures. The theory has emerged over recent decades as essential both for the analysis of algorithms and for the study of scientific models in many

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disciplines, including probability theory, statistical physics, computational biology, and information theory. With a careful combination of symbolic enumeration methods and complex analysis, drawing heavily on generating functions, results of sweeping generality emerge that can be applied in particular to fundamental structures such as permutations, sequences, strings, walks, paths, trees, graphs and maps. This account is the definitive treatment of the topic. The authors give full coverage of the underlying mathematics and a thorough treatment of both classical and modern applications of the theory. The text is complemented with exercises, examples, appendices and notes to aid understanding. The book can be used for an advanced undergraduate or

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a graduate course, or for self-study.

Based on a 15-year successful approach to teaching aircraft flight mechanics at the US Air Force Academy, this text explains the concepts and derivations of equations for aircraft flight mechanics. It covers aircraft performance, static stability, aircraft dynamics stability and feedback control.

R Markdown: The Definitive Guide is the first official book authored by the core R Markdown developers that provides a comprehensive and accurate reference to the R Markdown ecosystem. With R Markdown, you can easily create reproducible data analysis reports, presentations, dashboards, interactive applications, books, dissertations, websites, and journal articles, while

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enjoying the simplicity of Markdown and the great power of R and other languages. In this book, you will learn

- Basics: Syntax of Markdown and R code chunks, how to generate figures and tables, and how to use other computing languages
- Built-in output formats of R Markdown: PDF/HTML/Word/RTF/Markdown documents and ioslides/Slidy/Beamer/PowerPoint presentations
- Extensions and applications: Dashboards, Tufte handouts, xaringan/reveal.js presentations, websites, books, journal articles, and interactive tutorials
- Advanced topics: Parameterized reports, HTML widgets, document templates, custom output formats, and Shiny documents.

Yihui Xie is a software engineer at RStudio. He has authored and co-authored several R packages,

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including knitr, rmarkdown, bookdown, blogdown, shiny, xaringan, and animation. He has published three other books, Dynamic Documents with R and knitr, bookdown: Authoring Books and Technical Documents with R Markdown, and blogdown: Creating Websites with R Markdown. J.J. Allaire is the founder of RStudio and the creator of the RStudio IDE. He is an author of several packages in the R Markdown ecosystem including rmarkdown, flexdashboard, learnr, and radix. Garrett Grolemund is the co-author of R for Data Science and author of Hands-On Programming with R. He wrote the lubridate R package and works for RStudio as an advocate who trains engineers to do data science with R and the Tidyverse.

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SVG Essentials

Gnuplot in Action

R in Action, Third Edition

Die wissenschaftliche Arbeit mit LaTeX

Calculus

Advanced Calculus

bookdown: Authoring Books and Technical Documents with R Markdown presents a much easier way to write books and technical publications than traditional tools such as LaTeX and Word. The bookdown package inherits the simplicity of syntax and flexibility for data analysis from R Markdown, and

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extends R Markdown for technical writing, so that you can make better use of document elements such as figures, tables, equations, theorems, citations, and references. Similar to LaTeX, you can number and cross-reference these elements with bookdown. Your document can even include live examples so readers can interact with them while reading the book. The book can be rendered to multiple output formats, including LaTeX/PDF, HTML, EPUB, and Word, thus making it easy to put your

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documents online. The style and theme of these output formats can be customized. We used books and R primarily for examples in this book, but bookdown is not only for books or R. Most features introduced in this book also apply to other types of publications: journal papers, reports, dissertations, course handouts, study notes, and even novels. You do not have to use R, either. Other choices of computing languages include Python, C, C++, SQL, Bash, Stan, JavaScript, and so on, although R is best supported. You can also

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leave out computing, for example, to write a fiction. This book itself is an example of publishing with bookdown and R Markdown, and its source is fully available on GitHub. 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

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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.

The hippocampus is one of a group of remarkable structures embedded within the brains medial temporal lobe. Long known to be important for memory, it has been a prime focus of neuroscience research for many years. This volume offers an account of what

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the hippocampus does, and what happens when things go wrong.--[Source inconneue]. This presentation of statistical methods features extensive use of graphical displays for exploring data and for displaying the analysis. The authors demonstrate how to analyze data—showing code, graphics, and accompanying computer listings. They emphasize how to construct and interpret graphs, discuss principles of graphical design, and show how tabular results are used to confirm the visual impressions

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derived from the graphs. Many of the graphical formats are novel and appear here for the first time in print.

An Intermediate Course with Examples in S-Plus, R, and SAS

The R Book

Topics in Clifford Analysis

Mathematical Illustrations

unter Verwendung von LuaTeX, KOMA-Script und Biber/BibLaTeX

The author's goal is to start a dialogue between

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mathematicians and cognitive scientists. He discusses, from a working mathematician's point of view, the mystery of mathematical intuition: why are certain mathematical concepts more intuitive than others? To what extent does the "small scale" structure of mathematical concepts and algorithms reflect the workings of the human brain? What are the "elementary particles" of mathematics that build up the mathematical universe? The book is saturated with amusing examples from a wide range of disciplines--from turbulence to error-correcting codes to logic--as well as with just puzzles and brainteasers. Despite the very serious subject matter, the author's approach is lighthearted and entertaining. This is an unusual and unusually fascinating book. Readers who never thought about mathematics after

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their school years will be amazed to discover how many habits of mind, ideas, and even material objects that are inherently mathematical serve as building blocks of our civilization and everyday life. A professional mathematician, reluctantly breaking the daily routine, or pondering on some resisting problem, will open this book and enjoy a sudden return to his or her young days when mathematics was fresh, exciting, and holding all promises. And do not take the word "microscope" in the title too literally: in fact, the author looks around, in time and space, focusing in turn on a tremendous variety of motives, from mathematical "memes" (genes of culture) to an unusual life of a Hollywood star.

--Yuri I. Manin, Max-Planck Institute of Mathematics, Bonn, and Northwestern University

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A completely self-contained step-by-step introduction to the graphics programming language PostScript plus advice on what goes into good mathematical illustrations.

"...offer[s] a challenging exploration of problem solving mathematics and preparation for programs such as MATHCOUNTS and the American Mathematics Competition."--Back cover

Motivated and enlightening solutions to the 2012 AMC 10A by former AMC (AHSME) two-time perfect scorer Mathew Crawford.

Analytic Combinatorics

New Directions in Typesetting

R Markdown

Fonts & Encodings

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Special Volume in Honor of Wolfgang Sprößig

Key Concepts for the FRCA

Though it incorporates much new material, this new edition preserves the general character of the book in providing a collection of solutions of the equations of diffusion and describing how these solutions may be obtained.

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,

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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.

Complementing The LaTeX Companion, this new graphics companion addresses one of the most common needs among users of the LaTeX typesetting system: the incorporation of graphics into text. It provides the first full description of the standard LaTeX color and graphics packages, and shows how you can combine TeX and PostScript capabilities to

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produce beautifully illustrated pages. You will learn how to incorporate graphic files into a LaTeX document, program technical diagrams using several different languages, and achieve special effects with fragments of embedded PostScript. Furthermore, you'll find detailed descriptions of important packages like Xy-pic, PSTricks, and METAPOST; the dvips dvi to PostScript driver; and Ghostscript. Introduction and background; Exploratory data analysis and graphics; Deterministic functions for ecological modeling; Probability and stochastic distributions for ecological modeling; Stochastic simulation and power analysis; Likelihood and all that; Optimization and all that; Likelihood examples; Standard statistics revisited; Modeling variance; Dynamic models.

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bookdown

Mathematics Under the Microscope

The Book of R

LaTeX and Friends

Authoring Books and Technical Documents with R Markdown

The LaTeX Graphics Companion

This textbook offers a high-level introduction to multi-variable differential calculus. Differential forms are introduced incrementally in the narrative, eventually leading to a unified treatment of Green's, Stokes' and Gauss' theorems. Furthermore, the presentation offers a natural route to differential geometry. Contents: Calculus of Vector Functions Tangent Spaces and

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1-forms Line Integrals Differential Calculus of Mappings Applications of Differential Calculus Double and Triple Integrals Wedge Products and Exterior Derivatives Integration of Forms Stokes' Theorem and Applications

Summary Gnuplot in Action, Second Edition is a major revision of this popular and authoritative guide for developers, engineers, and scientists who want to learn and use gnuplot effectively. Fully updated for gnuplot version 5, the book includes four pages of color illustrations and four bonus appendixes available in the eBook. Purchase of the print book includes a

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free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Gnuplot is an open-source graphics program that helps you analyze, interpret, and present numerical data.

Available for Unix, Mac, and Windows, it is well-maintained, mature, and totally free. About the Book Gnuplot in Action, Second Edition is a major revision of this authoritative guide for developers, engineers, and scientists. The book starts with a tutorial introduction, followed by a systematic overview of gnuplot's core features and full coverage of gnuplot's advanced capabilities. Experienced readers will

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appreciate the discussion of gnuplot 5's features, including new plot types, improved text and color handling, and support for interactive, web-based display formats. The book concludes with chapters on graphical effects and general techniques for understanding data with graphs. It includes four pages of color illustrations. 3D graphics, false-color plots, heatmaps, and multivariate visualizations are covered in chapter-length appendixes available in the eBook. What's Inside Creating different types of graphs in detail Animations, scripting, batch operations Extensive discussion of terminals Updated to cover

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gnuplot version 5 About the Reader No prior experience with gnuplot is required. This book concentrates on practical applications of gnuplot relevant to users of all levels. About the Author Philipp K. Janert, PhD, is a programmer and scientist. He is the author of several books on data analysis and applied math and has been a gnuplot power user and developer for over 20 years. Table of Contents PART 1 GETTING STARTED Prelude: understanding data with gnuplot Tutorial: essential gnuplot The heart of the matter: the plot command PART 2 CREATING GRAPHS Managing data sets and files Practical

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matters: strings, loops, and history A catalog of styles

Decorations: labels, arrows, and explanations All

about axes PART 3 MASTERING TECHNICALITIES

Color, style, and appearance Terminals and output

formats Automation, scripting, and animation Beyond

the defaults: workflow and styles PART 4

UNDERSTANDING DATA Basic techniques of

graphical analysis Topics in graphical analysis Coda:

understanding data with graphs

This practical, example-driven introduction teaches

the foundations of the Mathematica language so it can

be applied to solving concrete problems.

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The unique feature of this compact student's introduction is that it presents concepts in an order that closely follows a standard mathematics curriculum, rather than structure the book along features of the software. As a result, the book provides a brief introduction to those aspects of the Mathematica software program most useful to students. The second edition of this well loved book is completely rewritten for Mathematica 6 including coverage of the new dynamic interface elements, several hundred exercises and a new chapter on programming. This book can be used in a variety of

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courses, from precalculus to linear algebra. Used as a supplementary text it will aid in bridging the gap between the mathematics in the course and Mathematica. In addition to its course use, this book will serve as an excellent tutorial for those wishing to learn Mathematica and brush up on their mathematics at the same time.

Implicit Curves and Surfaces: Mathematics, Data Structures and Algorithms

A First Course in Programming and Statistics

Illustrating Documents with TeX and PostScript

The Definitive Guide

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Data analysis and graphics with R and Tidyverse

The Mathematics of Diffusion

Implicit objects have gained increasing importance in geometric modeling, visualisation, animation, and computer graphics, because their geometric properties provide a good alternative to traditional parametric objects. This book presents the mathematics, computational methods and data structures, as well as the algorithms needed to render implicit curves and surfaces, and shows how implicit objects can easily describe smooth, intricate, and articulatable shapes, and hence why they are being increasingly used in graphical

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applications. Divided into two parts, the first introduces the mathematics of implicit curves and surfaces, as well as the data structures suited to store their sampled or discrete approximations, and the second deals with different computational methods for sampling implicit curves and surfaces, with particular reference to how these are applied to functions in 2D and 3D spaces.

Sage for Undergraduates

A Manual of Geometry and PostScript

Ecological Models and Data in R

The Unofficial 2012 AMC 10B Solution Guide

The Hippocampus Book