Maple Tutorial User Guide

Statistics with MapleGNU OctaveDavis's Drug Guide for NursesVisual Linear Algebra, Student Solutions ManualSage for UndergraduatesIntroduction to MapleMaple Reference ManualApplications of Abstract Algebra with Maple and MATLAB, Second EditionEncyclopedia of MicrocomputersThe Maple HandbookA Student's Guide to the Study, Practice, and Tools of Modern MathematicsPartial Differential EquationsMaple V Learning GuideMathematical BiologyDynamical Systems with Applications using MAPLEDigital Spectral AnalysisMathematica by ExampleA First Course in Scientific ComputingA Guide to MATLABHigh Vibrational BeautyMaple 11: User ManualMaple V Programming GuideMaple via CalculusThe Wholistic Healing Guide to CannabisMultivariable Mathematics with MapleInteractive Operations Research with MapleTools of American Mathematics Teaching, 1800–2000Concrete Mathematics: A Foundation for Computer ScienceThe Maple BookImporting Into the United StatesWATFOR-77WATCOM PascalWATFILE/plus Data Manipulation SystemMATLAB GuideThe Maple HandbookMaple V. 3An Introduction to Programming in Emacs LispFirst Leaves: A Tutorial Introduction to Maple VThe Maple® O.D.E. Lab BookLinear and Nonlinear Programming with Maple

Statistics with Maple

Offering numeric computation, symbolic computation,

graphics, and programming, Maple V Release 3 Student Edition gives students the power to explore and solve a tremendous range of problems with unsurpassed speed and accuracy. Featuring both 3-D and 2-D graphics and more than 2,500 built-in functions. Maple V Release 3,Student Edition offers students all the power and capability they need for the entire array of undergraduate courses in mathematics, science, and engineering.Maple V's vast library of functions also provides sophisticated scientific visualization, programming, and document preparation capabilities, including the ability to output standard mathematical notation.

GNU Octave

A fresh, forward-looking undergraduate textbook that treats the finite element method and classical Fourier series method with equal emphasis.

Davis's Drug Guide for Nurses

Maple is a very powerful computer algebra system used by students, educators, mathematicians, statisticians, scientists, and engineers for doing numerical and symbolic computations. Greatly expanded and updated from the author's MAPLE V Primer, The MAPLE Book offers extensive coverage of the latest version of this outstanding software package, MAPLE 7.0 The MAPLE Book serves both as an introduction to Maple and as a reference. Organized according to level and subject area of mathematics, it first covers the basics of high school

algebra and graphing, continues with calculus and differential equations then moves on to more advanced topics, such as linear algebra, vector calculus, complex analysis, special functions, group theory, number theory and combinatorics. The MAPLE Book includes a tutorial for learning the Maple programming language. Once readers have learned how to program, they will appreciate the real power of Maple. The convenient format and straightforward style of The MAPLE Book let users proceed at their own pace, practice with the examples, experiment with graphics, and learn new functions as they need them. All of the Maple commands used in the book are available on the Internet, as are links to various other files referred to in the book. Whatever your level of expertise, you'll want to keep The MAPLE Book next to your computer.

Visual Linear Algebra, Student Solutions Manual

Maple V Mathematics Programming Guide is the fully updated language and programming reference for Maple V Release 5. It presents a detailed description of Maple V Release 5 - the latest release of the powerful, interactive computer algebra system used worldwide as a tool for problem-solving in mathematics, the sciences, engineering, and education. This manual describes the use of both numeric and symbolic expressions, the data types available, and the programming language statements in Maple. It shows how the system can be extended or customized through user defined routines and gives

complete descriptions of the system's user interface and 2D and 3D graphics capabilities.

Sage for Undergraduates

Introduction to Maple

This introduction to the theory of dynamical systems utilizes MAPLE to facilitate the understanding of the theory and to deal with the examples, diagrams, and exercises. A wide range of topics in differential equations and discrete dynamical systems is discussed with examples drawn from many different areas of application, including mechanical systems and materials science, electronic circuits and nonlinear optics, chemical reactions and meteorology, and population modeling.

Maple Reference Manual

This publication provides an overview of the importing process and contains general information about import requirements. This edition contains much new and revised material brought about because of changes in the law, particularly the Customs Modernization Act. The Customs modernization provisions has fundamentally altered the process by shifting to the importer the legal responsibility for declaring the value, classification, and rate of duty applicable to entered merchandise.Chapters cover entry of goods, informed compliance, invoices, assessment of duty, classification and value, marking,

special requirements for alcoholic beverages, motor vehicles and boats, import quotas, fraud, and foreign trade zones.In addition to the material provided by the U. S. Customs Service, the private commercial publisher of this book has provided a bonus chapter on how to build a tax-free import-export business.

Applications of Abstract Algebra with Maple and MATLAB, Second Edition

Author Tammi Sweet combines her expertise in herbal medicine and neurobiology in this in-depth guide to understanding the science behind the effectiveness of cannabis medicine. In addition to exploring the chemistry of the whole cannabis plant, she explains the physiology of the human body's endocannabinoid system and why and how it is affected by ingesting cannabis. Based on research and her own clinical experience, Sweet provides technique instructions for the best medicinal cannabis preparations and specific dosage recommendations for using these remedies to address a wide range of conditions, including stress, chronic pain, anxiety, PTSD, insomnia, and more. This volume offers a wealth of valuable information to healthcare professionals, practitioners of the healing arts, dispensary workers, and medical cannabis users who want to understand the science of cannabis and its effects on the whole body. This publication conforms to the EPUB Accessibility specification at WCAG 2.0 Level AA.

Encyclopedia of Microcomputers

The fully revised edition of this best-selling title presents the modern computer algebra system Maple. It teaches the reader not only what can be done by Maple, but also how and why it can be done. The book provides the necessary background for those who want the most of Maple or want to extend its built-in knowledge, containing both elementary and more sophisticated examples as well as many exercises.

The Maple Handbook

Digital Spectral Analysis offers a broad perspective of spectral estimation techniques and their implementation. Coverage includes spectral estimation of discrete-time or discrete-space sequences derived by sampling continuous-time or continuous-space signals. The treatment emphasizes the behavior of each spectral estimator for short data records and provides over 40 techniques described and available as implemented MATLAB functions. In addition to summarizing classical spectral estimation, this text provides theoretical background and review material in linear systems, Fourier transforms, matrix algebra, random processes, and statistics. Topics include Prony's method, parametric methods, the minimum variance method, eigenanalysis-based estimators, multichannel methods, and two-dimensional methods. Suitable for advanced undergraduates and graduate students of electrical engineering — and for scientific use in the signal processing application community outside of universities — the treatment's prerequisites include some knowledge of discrete-time linear system and

transform theory, introductory probability and statistics, and linear algebra. 1987 edition.

A Student's Guide to the Study, Practice, and Tools of Modern Mathematics

New edition of the number one nursing drug guide in the educational market.

Partial Differential Equations

Most of the GNU Emacs integrated environment is written in the programming language called Emacs Lisp. The code written in this programming language is the software (the sets of instructions) that tell the computer what to do when you give it commands. Emacs is designed so that you can write new code in Emacs Lisp and easily install it as an extension to the editor. This introduction to Emacs Lisp is designed to get you started: to guide you in learning the fundamentals of programming, and more importantly, to show you how you can teach yourself to go further. This manual is available online for free at gnu.org. This manual is printed in grayscale.

Maple V Learning Guide

From the blackboard to the graphing calculator, the tools developed to teach mathematics in America have a rich history shaped by educational reform, technological innovation, and spirited entrepreneurship. In Tools of American Mathematics Teaching, 1800–2000, Peggy Aldrich Kidwell, Amy

Ackerberg-Hastings, and David Lindsay Roberts present the first systematic historical study of the objects used in the American mathematics classroom. They discuss broad tools of presentation and pedagogy (not only blackboards and textbooks, but early twentieth-century standardized tests, teaching machines, and the overhead projector), tools for calculation, and tools for representation and measurement. Engaging and accessible, this volume tells the stories of how specific objects such as protractors, geometric models, slide rules, electronic calculators, and computers came to be used in classrooms, and how some disappeared.

Mathematical Biology

Dynamical Systems with Applications using MAPLE

A Student's Guide to the Study, Practice, and Tools of Modern Mathematics provides an accessible introduction to the world of mathematics. It offers tips on how to study and write mathematics as well as how to use various mathematical tools, from LaTeX and Beamer to Mathematica® and MapleTM to MATLAB® and R. Along with a color insert, the text includes exercises and challenges to stimulate creativity and improve problem solving abilities. The first section of the book covers issues pertaining to studying mathematics. The authors explain how to write mathematical proofs and papers, how to perform mathematical research, and how to give

mathematical presentations. The second section focuses on the use of mathematical tools for mathematical typesetting, generating data, finding patterns, and much more. The text describes how to compose a LaTeX file, give a presentation using Beamer, create mathematical diagrams, use computer algebra systems, and display ideas on a web page. The authors cover both popular commercial software programs and free and open source software, such as Linux and R. Showing how to use technology to understand mathematics, this guide supports students on their way to becoming professional mathematicians. For beginning mathematics students, it helps them study for tests and write papers. As time progresses, the book aids them in performing advanced activities, such as computer programming, typesetting, and research.

Digital Spectral Analysis

Helps Students Understand Mathematical Programming Principles and Solve Real-World Applications Supplies enough mathematical rigor yet accessible enough for undergraduates Integrating a hands-on learning approach, a strong linear algebra focus, MapleTM software, and real-world applications, Linear and Nonlinear Programming with MapleTM: An Interactive, Applications-Based Approach introduces undergraduate students to the mathematical concepts and principles underlying linear and nonlinear programming. This text fills the gap between management science books lacking mathematical detail and rigor and graduate-level

books on mathematical programming. Essential linear algebra tools Throughout the text, topics from a first linear algebra course, such as the invertible matrix theorem, linear independence, transpose properties, and eigenvalues, play a prominent role in the discussion. The book emphasizes partitioned matrices and uses them to describe the simplex algorithm in terms of matrix multiplication. This perspective leads to streamlined approaches for constructing the revised simplex method, developing duality theory, and approaching the process of sensitivity analysis. The book also discusses some intermediate linear algebra topics, including the spectral theorem and matrix norms. Maple enhances conceptual understanding and helps tackle problems Assuming no prior experience with Maple, the author provides a sufficient amount of instruction for students unfamiliar with the software. He also includes a summary of Maple commands as well as Maple worksheets in the text and online. By using Maple's symbolic computing components, numeric capabilities, graphical versatility, and intuitive programming structures, students will acquire a deep conceptual understanding of major mathematical programming principles, along with the ability to solve moderately sized real-world applications. Hands-on activities that engage students Throughout the book, student understanding is evaluated through "waypoints" that involve basic computations or short questions. Some problems require paper-and-pencil calculations; others involve more lengthy calculations better suited for performing with Maple. Many sections contain exercises that are conceptual in nature and/or involve writing proofs. In addition, six

substantial projects in one of the appendices enable students to solve challenging real-world problems.

Mathematica by Example

This book offers a new approach to introductory scientific computing. It aims to make students comfortable using computers to do science, to provide them with the computational tools and knowledge they need throughout their college careers and into their professional careers, and to show how all the pieces can work together. Rubin Landau introduces the requisite mathematics and computer science in the course of realistic problems, from energy use to the building of skyscrapers to projectile motion with drag. He is attentive to how each discipline uses its own language to describe the same concepts and how computations are concrete instances of the abstract. Landau covers the basics of computation, numerical analysis, and programming from a computational science perspective. The first part of the printed book uses the problem-solving environment Maple as its context, with the same material covered on the accompanying CD as both Maple and Mathematica programs; the second part uses the compiled language Java, with equivalent materials in Fortran90 on the CD; and the final part presents an introduction to LaTeX replete with sample files. Providing the essentials of computing, with practical examples, A First Course in Scientific Computing adheres to the principle that science and engineering students learn computation best while sitting in front of a computer, book in hand, in trial-

and-error mode. Not only is it an invaluable learning text and an essential reference for students of mathematics, engineering, physics, and other sciences, but it is also a consummate model for future textbooks in computational science and engineering courses. A broad spectrum of computing tools and examples that can be used throughout an academic career Practical computing aimed at solving realistic problems Both symbolic and numerical computations A multidisciplinary approach: science + math + computer science Maple and Java in the book itself; Mathematica, Fortran90, Maple and Java on the accompanying CD in an interactive workbook format

A First Course in Scientific Computing

Modern software tools like Maple have the potential to alter radically the way mathematics is taught, learned, and done. Bringing such tools into the classroom during lectures, assignments, and examinations means that new ways oflooking at mathematics can becomepermanent fixtures ofthe curriculum. It is universal access that will make a software-based approach to mathematics become the norm. In 1988, with NSF funding under an III grant, I had the opportunity to bring Maple into the calculus classroom at Rose-Hulman Institute of Technology. Since then a new curriculum based on the availability ofcomputer algebra systems has evolved at RHIT and in my own courses. This volume contains a record of some of the insights gained into pedagogy using Maple in calculus. The activities and ideas captured in these Maple worksheets reflect concepts in calculus

imple mented in Maple. There is an overt message to the reader that carries with it a side effect. However, it is possible that for one reader the side effect is the message and the message is the side effect! I had intended to put before my audience examples extracted from my Maple based curriculum to entice a wider acceptance ofthe benefits of making a computer algebra system become the basis of a revised calculus syllabus. By examples I had hoped to demonstrate the "rightness" of using software tools for teaching and learning calculus.

A Guide to MATLAB

As the open-source and free competitor to expensive software like MapleTM, 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.

High Vibrational Beauty

Statistics with Maple is a practical guide for engineers, statisticians, business professionals and others who use the Maple software package and who wish to use it to produce numerical summaries, make graphical displays, and perform statistical inference. The book and software package is unique in its focus on using Maple for statistical methodology. This tutorial and reference manual assumes that readers have a basic knowledge of statistics and a familiarity with Maple. * When a statistical concept is introduced, the appropriate Maple syntax is provided along with a straightforward, worked-out example * Authors provide over 150 procedures on a CD-ROM that is packaged with the book * Users are invited to copy the code into Maple worksheets and modify it for their own use

Maple 11: User Manual

Maple V Programming Guide

This third edition of Mathematica by Example is completely compatible with recent Mathematica versions. Highly readable and informative, this volume is geared toward the beginning Mathematica user, and focuses on the most often used features of this powerful tool. The book covers popular applications of mathematics within different areas including calculus, linear algebra, ordinary differential equations, and partial differential equations. * Fully

compatible with recent releases of Mathematica *
Includes CD-ROM containing all input used in text *
Focuses on the beginning Mathematica user * Covers
all the basics needed to get up and running with
Mathematica, especially for use in mathematics *
Written by authors of several successful AP books on
Mathematica

Maple via Calculus

The Wholistic Healing Guide to Cannabis

This text presents mathematical biology as a field
with a unity of its own, rather than only the intrusion
of one science into another. The book focuses on
problems of contemporary interest, such as cancer,
genetics, and the rapidly growing field of genomics.

Multivariable Mathematics with Maple

Mathematics of Computing -- Mathematical Software.

Interactive Operations Research with Maple

This tutorial shows how to use Maple both as a
calculator with instant access to hundreds of high-
level math routines and as a programming language
for more demanding tasks. It covers topics such as
the basic data types and statements in the Maple
language. It explains the differences between numeric
computation and symbolic computation and illustrates

how both are used in Maple. Extensive "how-to" examples are used throughout the tutorial to show how common types of calculations can be expressed easily in Maple. The manual also uses many graphics examples to illustrate the way in which 2D and 3D graphics can aid in understanding the behavior of functions.

Tools of American Mathematics Teaching, 1800–2000

Strategies in the Microprocessor Industry to Teaching Critical Thinking and Problem Solving

Concrete Mathematics: A Foundation for Computer Science

The Maple Book

Today, scientific computing and data analysis play an integral part in most scientific disciplines ranging from mathematics and biology to imaging processing and finance. With GNU Octave you have a highly flexible tool that can solve a vast number of such different problems as complex statistical analysis and dynamical system studies. The GNU Octave Beginner's Guide gives you an introduction that enables you to solve and analyze complicated numerical problems. The book is based on numerous concrete examples and at the end of each chapter you will find exercises to test your knowledge. It's easy to learn GNU Octave, with the GNU Octave

Beginner's Guide to hand. Using real-world examples the GNU Octave Beginner's Guide will take you through the most important aspects of GNU Octave. This practical guide takes you from the basics where you are introduced to the interpreter to a more advanced level where you will learn how to build your own specialized and highly optimized GNU Octave toolbox package. The book starts by introducing you to work variables like vectors and matrices, demonstrating how to perform simple arithmetic operations on these objects before explaining how to use some of the simple functionality that comes with GNU Octave, including plotting. It then goes on to show you how to write new functionality into GNU Octave and how to make a toolbox package to solve your specific problem. Finally, it demonstrates how to optimize your code and link GNU Octave with C and C++ code enabling you to solve even the most computationally demanding tasks. After reading GNU Octave Beginner's Guide you will be able to use and tailor GNU Octave to solve most numerical problems and perform complicated data analysis with ease.

Importing Into the United States

WATFOR-77

Eliminating the need for heavy number-crunching, sophisticated mathematical software packages open the door to areas like cryptography, coding theory, and combinatorics that are dependent on abstract algebra. Applications of Abstract Algebra with Maple

and MATLAB®, Second Edition explores these topics and shows how to apply the software programs to abstract algebra and its related fields. Carefully integrating MapleTM and MATLAB®, this book provides an in-depth introduction to real-world abstract algebraic problems. The first chapter offers a concise and comprehensive review of prerequisite advanced mathematics. The next several chapters examine block designs, coding theory, and cryptography while the final chapters cover counting techniques, including Pólya's and Burnside's theorems. Other topics discussed include the Rivest, Shamir, and Adleman (RSA) cryptosystem, digital signatures, primes for security, and elliptic curve cryptosystems. New to the Second Edition Three new chapters on Vigenère ciphers, the Advanced Encryption Standard (AES), and graph theory as well as new MATLAB and Maple sections Expanded exercises and additional research exercises Maple and MATLAB files and functions available for download online and from a CD-ROM With the incorporation of MATLAB, this second edition further illuminates the topics discussed by eliminating extensive computations of abstract algebraic techniques. The clear organization of the book as well as the inclusion of two of the most respected mathematical software packages available make the book a useful tool for students, mathematicians, and computer scientists.

WATCOM Pascal

How to Use This Handbook The Maple Handbook is a

complete reference tool for the Maple language, and is written for all Maple users, regardless of their dis cipline or field(s) of interest. All the built-in mathematical, graphic, and system-based commands available in Maple V Release 2 are detailed herein. Please note that The Maple Handbook does not teach about the mathematics behind Maple commands. If you do not know the meaning of such concepts as definite integral, identity matrix, or prime integer, do not expect to learn them here. As well, while the introductory sections to each chapter taken together do provide a basic overview of the capabilities of Maple, it is highly recom mended that you also read a more thorough tutorial such as In troduction to Maple by Andre Heck or First Leaves: A Tutorial Introduction to Maple. Overall Organization One of the main premises of The Maple Handbook is that most Maple users approach the system to solve a particular problem (or set of problems) in a specific subject area. Therefore, all commands are organized in logical subsets that reflect these different cate gories (e.g., calculus, algebra, data manipulation, etc.) and the com mands within a subset are explained in a similar language, creating a tool that allows you quick and confident access to the information necessary to complete the problem you have brought to the system.

WATFILE/plus Data Manipulation System

An essential reference tool for all users of the Maple system, providing a complete listing of every command in the Maple language, categorised into

logical categories and explained in this context. A short, introductory tutorial starts the Handbook, and each category begins with a brief introduction to the related subject area. It is well referenced, with an alphabetical index of commands, and pointers to appropriate sections of the official Maple documentation. This new approach to reference material enhances that found in Maples on-line help files and provides a much more organised, intuitive resource for all users of the system. The Handbook improves efficiency by supplying users with the information they need - at their fingertips. This new edition covers the Maple V Release 4 symbolic computation language.

MATLAB Guide

This is a short, focused introduction to MATLAB, a comprehensive software system for mathematical and technical computing. It contains concise explanations of essential MATLAB commands, as well as easily understood instructions for using MATLAB's programming features, graphical capabilities, simulation models, and rich desktop interface. Written for MATLAB 7, it can also be used with earlier (and later) versions of MATLAB. This book teaches how to graph functions, solve equations, manipulate images, and much more. It contains explicit instructions for using MATLAB's companion software, Simulink, which allows graphical models to be built for dynamical systems. MATLAB's new "publish" feature is discussed, which allows mathematical computations to be combined with text and graphics, to produce

polished, integrated, interactive documents. For the beginner it explains everything needed to start using MATLAB, while experienced users making the switch to MATLAB 7 from an earlier version will also find much useful information here.

The Maple Handbook

Interactive Operations Research with Maple: Methods and Models has two ob jectives: to provide an accelerated introduction to the computer algebra system Maple and, more importantly, to demonstrate Maple's usefulness in modeling and solving a wide range of operations research (OR) problems. This book is written in a format that makes it suitable for a one-semester course in operations research, management science, or quantitative methods. A nwnber of students in the departments of operations research, management science, oper ations management, industrial and systems engineering, applied mathematics and advanced MBA students who are specializing in quantitative methods or opera tions management will find this text useful. Experienced researchers and practi tioners of operations research who wish to acquire a quick overview of how Maple can be useful in solving OR problems will find this an excellent reference. Maple's mathematical knowledge base now includes calculus, linear algebra, ordinary and partial differential equations, nwnber theory, logic, graph theory, combinatorics, statistics and transform methods. Although Maple's main strength lies in its ability to perform symbolic manipulations, it also has a

substantial knowledge of a large nwnber of nwnerical methods and can plot many different types of attractive-looking two-dimensional and three-dimensional graphs. After almost two decades of continuous improvement of its mathematical capabilities, Maple can now boast a user base of more than 300,000 academics, researchers and students in different areas of mathematics, science and engineering.

Maple V. 3

Following an innovative approach to learning, this text integrates paper and pencil skill building and the theoretical development of ideas with geometric exploration and conceptual understanding. Tutorials and traditional text. Visual Linear Algebra covers the topics in a standard one-semester introductory linear algebra course in forty-seven sections arranged in eight chapters. In each chapter, some sections are written in a traditional textbook style and some are tutorials designed to be worked through using either Maple or Mathematica. About the tutorials Each tutorial is a self-contained treatment of a core topic or application of linear algebra that a student can work through with minimal assistance from an instructor. The thirty tutorials are provided on the accompanying CD both as Maple worksheets and as Mathematica notebooks. They also appear in print as sections of the textbook. Geometry is used extensively to help students develop their intuition about the concepts of linear algebra. Applications. Students benefit greatly from working through an application, if the application

captures their interest and the materials give them substantial activities that yield worthwhile results. Ten carefully selected applications have been developed and an entire tutorial is devoted to each of them. Active Learning. To encourage students to be active learners, the tutorials have been designed to engage and retain their interest. The exercises, demonstrations, explorations, visualizations, and animations are designed to stimulate studentsa (tm) interest, encourage them to think clearly about the mathematics they are working through, and help them check their comprehension.

An Introduction to Programming in Emacs Lisp

First Leaves: A Tutorial Introduction to Maple V

Beauty is Wellness. Wellness is Beauty. Kerrilynn Pamer and Cindy DiPrima Morisse, founders of CAP Beauty, the all-natural beauty site and store, want to share their deep knowledge of the benefits of natural beauty, foods, and mindfulness techniques with you. Natural beauty is about making choices that create true radiance from the foods we eat to the way we move to how we care for ourselves and our planet. You've already purified your meals, workouts, and bodies by returning to clean naturals. Now it's time to align your beauty routine with the other wellness practices you follow. What we put on our skin is easily as important as what we put in our mouths. But

natural beauty is about much more than just products. Through routines, recipes, and rituals, High Vibrational Beauty addresses beauty from the inside out and vibrancy from the outside in. Divided into seasons and focused on self-care and rejuvenation, High Vibrational Beauty combines mantras, meditations, natural skin care regimens, and more than 100 plant-based recipes to help you achieve radical radiance. This is the only guidebook you need to create true and lasting beauty for the mind, body, and soul.

The Maple® O.D.E. Lab Book

Linear and Nonlinear Programming with Maple

The Maple ODE Lab Book is intended to provide a thorough introduc tion to using symbolic computation software to model, solve, explore, and visualize ordinary differential equations. It is best used as a supplement to existing texts (see the bibliography for some of our recommended texts). Maple was chosen as our software package because of its ease-of-use, affordability, and popularity at many universities and colleges around the world. The version being used is Maple V Release 4. If you have a previous release of Maple, some of the commands shown in this lab book will work differently (or not at all), but the basic groundwork for solving ODEs hasn't changed. Speak to your system administrator about upgrading to Release 4, or contact: Waterloo Maple Inc. 450 Phillip

Street Waterloo, Ontario CANADA N2L 5J2 Phone: (519) 747-2373 FAX: (519) 747-5284 E-mail: info@maplesoft.com WWW: http://www.maplesoft.com 1 2 • Chapter 1. Introduction How This Lab Book Is Organized Each subsequent chapter of this lab book contains information and ex amples of how to apply Maple to various elements of ordinary differential equations. It is suggested that you read the chapters with your computer on and Maple V Release 4 running. You can then execute many of the com mands yourself and experiment by changing various parameters and/or initial conditions, observing the corresponding changes in the results.

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION