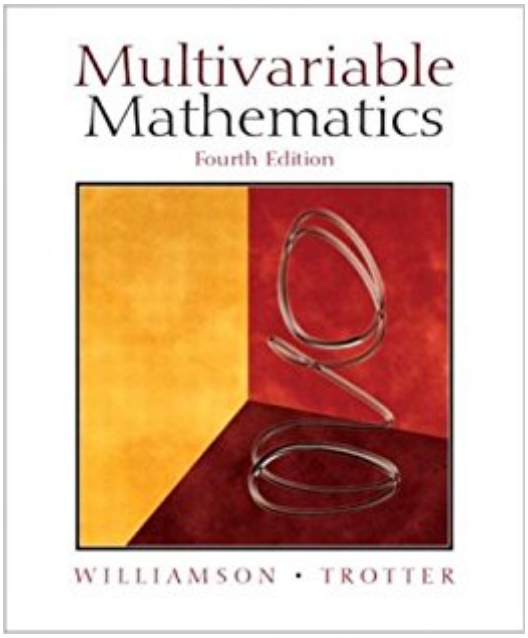
Multivariable Mathematics (4th Edition)



Synopsis

This book explores the standard problem-solving techniques of multivariable mathematics Ã¢â ¬â • integrating vector algebra ideas with multivariable calculus and differential equations. Unique coverage including, the introduction of vector geometry and matrix algrebra, the early introduction of the gradient vector as the key to differentiability, optional numerical methods. For any reader interested in learning more about this discipline.

Book Information

Paperback: 864 pages

Publisher: Pearson; 4 edition (July 4, 2003)

Language: English

ISBN-10: 0130672769

ISBN-13: 978-0130672766

Product Dimensions: 8 x 1.6 x 9.2 inches

Shipping Weight: 3.6 pounds (View shipping rates and policies)

Average Customer Review: 3.7 out of 5 stars 8 customer reviews

Best Sellers Rank: #216,359 in Books (See Top 100 in Books) #111 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Algebra > Linear #118 inÃ Â Books > Science & Math > Mathematics > Applied > Differential Equations #420 inÃ Â Books > Textbooks > Science & Mathematics > Mathematics > Calculus

Customer Reviews

This text explores the standard problem-solving techniques of multivariable mathematics -- integrating vector algebra ideas with multivariable calculus and differential equations.

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I love the example of the book. I usually skip any example in the textbook because they provide no additional information. This book provide concise and useful information which will give you further insight on the topic

Good quality, no damage

Pretty Standard Mutivariable text

This book is TERRIBLE. This is mainly due to fact that its authors have written the text in an extremely confusing fashion. The book doesn’t have any conventional examples (there are portions labeled "example 1 (or 2, 3, etc)" but they are not really examples in the conventional sense since they don’t even propose a question). Many simplification steps (elucidating exactly what the authors are doing) in a particular explanation are simply left out. The figures don’t have any labels on them signifying as to what they refer to (a graph will simply say "FIGURE 4.13" not having any notification as to its equation, etc.; though the text does say "refer to figure 4.13" it would have been nice to label the figures more clearly). Worst of all, the text is just flat out confusing in relation to the way the authors have worded the material. Were they just lost in their own little world when writing this text? Have they even taught this subject to undergrads (it feels more like their crowd was that of a group of people who already know the subject by heart). I was pretty much lost throughout the chapter on vectors (my calc-based physics book did a much better job on elucidating the subject). Overall, do yourself a favor and STAY AWAY FROM THIS BOOK. Don’t even bother taking a class from a professor that uses this as the required text (unless he’s reallllllly good at clearly explaining the material).

For those with sufficient preparation (say, a good BC Calculus course and an enjoyment of mathematics), this text offers a very fine presentation of multivariable calculus. Certainly, some of the material is challenging and some of the exercises require insight, but after finishing this book, or substantial portions of it, you will have a coherent view of multivariable calculus, as well as some appreciation of significant, but elementary, applications of linear algebra. I particularly recommend this text to those who have learned multivariable calculus in one of the "fat" three semester calculus texts, and feel that, although they could solve all the problems, they don’t really have any sense of what the subject is all about. This text has a distinguished history: it is the latest incarnation of a vector calculus text (Calculus of Vector Functions) first published in 1962 by Crowell and Williamson. Spivak described that text (and I hope Dover someday reissues the third edition) as "one of the first, and still one of the nicest, treatments of advanced calculus using linear algebra."

I've seen the editions of 1968 and 1972, and it looks to me as if the book has gotten worse with time.The 1968 version, which one reviewer claimed Spivak praised, was more of a Mathematics book than the one from 1972. This one looks more mainstream; it looks like many other books, while the latter was more advanced, and had _more_ illustrations (to be honest, I haven't counted...) Less epsilon-deltas. On the other hand, numerics crept in the 1972 edition.How is this possible? Sales pressure, I guess...Calculus book have gone down that road too.Let's hope someone clarifies whether this last edition is really worth getting.

I liked this book because it is written at a slightly more sophisticated level than most lower division math books. Admittedly, it is difficult to understand some of the proofs and examples on the first read. It just takes some time, after a second or third read, before the text begins to make sense. Then you'll realize the examples are presented quite well and you have everything you need to solve the problem sets. And you know you've learned the material well if you understand the text and you can do the problems, which are oriented more to make you think than compute.

This book was used for a two-course introductory math series at Stanford in 1996-7 and 1997-8. The book drew so many complaints that it was abandoned after two years. Personally, I found it difficult to understand many of the formal proofs and explanations provided. Many shortcuts were taken in solving the example problems which made them difficult to follow. The answers to problems in the back of the book were frequently incorrect. This is a poorly written book for all students except those extremely insightful in mathematics.

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