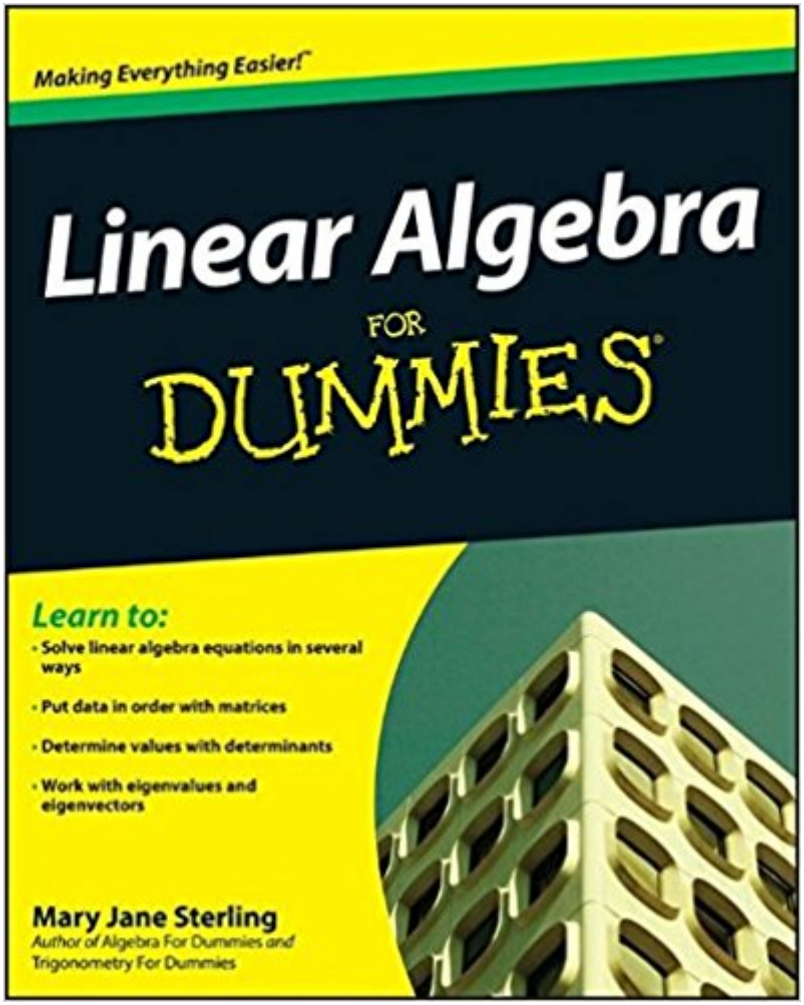
Linear Algebra For Dummies



Synopsis

Learn to: Solve linear algebra equations in several ways Put data in order with matrices Determine values with determinants Work with eigenvalues and eigenvectors Your hands-on guide to real-world applications of linear algebra Does linear algebra leave you feeling lost? No worries —this easy-to-follow guide explains the how and the why of solving linear algebra problems in plain English. From matrices to vector spaces to linear transformations, you'll understand the key concepts and see how they relate to everything from genetics to nutrition to spotted owl extinction. Line up the basics — discover several different approaches to organizing numbers and equations, and solve systems of equations algebraically or with matrices Relate vectors and linear transformations — link vectors and matrices with linear combinations and seek solutions of homogeneous systems Evaluate determinants — see how to perform the determinant function on different sizes of matrices and take advantage of Cramer's rule Hone your skills with vector spaces — determine the properties of vector spaces and their subspaces and see linear transformation in action Tackle eigenvalues and eigenvectors — define and solve for eigenvalues and eigenvectors and understand how they interact with specific matrices Open the book and find: Theoretical and practical ways of solving linear algebra problems Definitions of terms throughout and in the glossary New ways of looking at operations How linear algebra ties together vectors, matrices, determinants, and linear transformations Ten common mathematical representations of Greek letters Real-world applications of matrices and determinants

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Customer Reviews

Mary Jane Sterling is the author of numerous For Dummies books. She is a lecturer at Bradley University in Peoria, Illinois, where she has taught courses in algebra, calculus, and other mathematics topics for almost 30 years.

I've been all the way through this book once. I knew some linear algebra before, but also learned some new things here. I've also been watching a lot of videos at Khan Academy, as well as for an MIT course available on youtube. So this has not been my only resource.I think that, if you know nothing at all about linear algebra, and start reading this book, you will reach a point somewhere before the one-third way that you'll be utterly confused. Linear algebra is a very abstract topic, and a book of this brevity just doesn't have the opportunity to hammer topics home and cement them firmly before moving on.However, I think this book is very good in addition to other learning materials. It helped to reinforce them, and they helped to reinforce it. (I strongly recommend a book that has lots of exercises in addition to this one.) The book has some content devoted to real-world applications, to try to demonstrate why linear algebra is important, but don't expect too much along that line. A lot of ground is covered, so most of the material is devoted to getting concepts across, rather than showing how to apply them to real-world problems.As far as the "humor" associated with Dummies books, there really isn't any here. Instead, there's plenty of what I might call "quirky" phrasing, which is unfortunate, because if you're already confused by the topic, you might wonder whether a given phrase is significant, or just another lame attempt to make the book "fun."Overall, I'm glad I got the book. It helped to move me along. I won't say it made me an expert on the subject, but now I can easily define all kinds of terms, linear independence, a vector space, a basis, a dimension, a determinant, orthogonality, orthonormalization, eigenvectors--these and more are finally anchored firmly in my mind.

This is an irritating book to read, but has redeeming features. The bad puns and the contrived humor are distractions; there are too many typos; some of the notation is non-standard; and several of the descriptions of 'Real World Applications' are inadequate. On the other hand, a lot of ground is covered in a way that is very accessible, and some of the commentary and insights are genuinely helpful.

I'm amazed at the low reviews some people have posted of this book. I have had an interest in self-studying linear algebra for years but have had a lot of trouble getting comfortable with it. I tried Khan Academy's videos and found them great, but still didn't feel comfortable with the material. I

tried MIT’s course but stopped watching it because it moved a little too quickly for me (or felt too dry; I don’t remember, it was years ago). I bought a few different books and started them, but gave up after spending a few weeks making only a page or two of progress per day (also the writing style was very dry / formal). I’m not saying the MIT course and other books were bad, I’m just saying they probably weren’t the best resource for a total beginner who is doing self-study.I love the Dummies / Complete Idiot’s Guide books. I have used Dummies books to get intros to C, C++, Java, Calculus, Bridge (the card game), and probably other things I can’t remember. I like the clear organization, I like the focus on writing in plain-English, I like the examples, I like the attempts at humor (even when it falls flat I appreciate the attempt), I like the feeling of accomplishment I get when I finish each ~20-page chapter, I like the feeling of accomplishment that I get when I finish the books.If you’re serious about trying to self-study linear algebra I recommend that you get all the books with top ratings on and then hop between them depending on which one you feel most comfortable with. You should probably start with the easier-looking ones (ie this one, the Manga one, the Straum one). I also recommend you check out Khan Academy, Andrew Ng’s Machine Learning Coursera course, and the Brown University course "Coding the Matrix". I personally find it easier to watch video lectures first as a first-pass at the material and a way to get interested and motivated, and then make an attempt at the books afterwards.

First, there is an errata sheet at the Dummies website for the book if you’re concerned about the reported typos. However, in the Linear Algebra printing of the book I received in 2014 all of the typos had been corrected.I found this book extremely helpful so I could better understand what my textbook was trying to explain!

I found this book very helpful for putting the abstract language of linear algebra into laymen’s terms. I now read it in conjunction with my regular linear algebra textbook. I wish I had bought the book at the beginning of the semester, rather than halfway through, which by that time, I’d dug myself a rather deep hole. My only complaint is that it isn’t quite as exhaustive on terminology as maybe it could/should be. That said, it’s been a very helpful book, and it might, just might, get me through the class with a C.

Good book, but definitely not written in a "dummy style". IMHO, this book is in between of "dummy" and "specialized" text, so it demands you some careful reading.

Albert Einstein is credited with saying, ÃƒÂ¢Ã â ¬Ã Å“If you can’t explain it to a six year old, you don’t understand it yourself.ÃƒÂ¢Ã â ¬Ã Â• The authors of the "for dummies" series understand it. Without exception, I have very much appreciated and benefited from simple and clear explanations of what each method is. Math is by far the most poorly taught subject, this series is a notable exception.

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