# Matrices And Linear Algebra

## Synopsis

Linear algebra is one of the central disciplines in mathematics. A student of pure mathematics must know linear algebra if he is to continue with modern algebra or functional analysis. Much of the mathematics now taught to engineers and physicists requires it.This well-known and highly regarded text makes the subject accessible to undergraduates with little mathematical experience. Written mainly for students in physics, engineering, economics, and other fields outside mathematics, the book gives the theory of matrices and applications to systems of linear equations, as well as many related topics such as determinants, eigenvalues, and differential equations.Table of Contents:l. The Algebra of Matrices2. Linear Equations3. Vector Spaces4. Determinants5. Linear Transformations6. Eigenvalues and Eigenvectors7. Inner Product Spaces8. Applications to Differential EquationsFor the second edition, the authors added several exercises in each chapter and a brand new section in Chapter 7. The exercises, which are both true-false and multiple-choice, will enable the student to test his grasp of the definitions and theorems in the chapter. The new section in Chapter 7 illustrates the geometric content of Sylvester's Theorem by means of conic sections and quadric surfaces. 6 line drawings. Index. Two prefaces. Answer section.

## Book Information

Hardcover: 385 pages

Publisher: International Thomson Publishing (January 1, 1968)

ISBN-10: 0030669057

ISBN-13: 978-0030669057

Package Dimensions: 9 x 6 x 1 inches

Shipping Weight: 1.4 pounds

Average Customer Review: 3.7 out of 5 stars 17 customer reviews

Best Sellers Rank: #994,563 in Books (See Top 100 in Books) #54 inÃ Â Books > Science & Math > Mathematics > Matrices #389 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Algebra > Linear

## Customer Reviews

I am not a math person. I bought the book to spark some math on a higher level. I had no idea what matrices etc are. The math is on such a high abstract level that it is way beyond my ability to grab any basics for understanding it. But I am keeping the book for now. I will go over it now and then. Something may garner meanings from checking it out.

In past semesters, the course required text had always been a ridiculously expensive book with many pictures and long, tedious explanations. This book is excellent at explaining with minimal detail yet still getting the point across. The only con I can think of is the small number of problems, leaving only the conceptual and harder problems. But even this could be a pro, helping the student to think around the concepts rather than repetition of busy work exercises. I would suggest practicing from another source the topics you find more difficult.

Trying to teach myself matrix algebra. Will have to take an on-line course. These math books are difficult to follow. Others who are smarter than me would appreciate it more.

Not a bad Math book. It sure doesn't weigh alot. Not taking this math before, it doesn't seem to hard to follow. The teacher recommends this book and states its better than the other books that he has used before. Answers to questions are in the back and the proofs are not really hard to follow. The price of the book was outstanding.

except the posting take really long time. everything is OK.

this book is terrible, it's confusing and lack of explaination, i recommand u to get the Linear Algebra and it's application by Davie C. Lay

This is not a flashy book. You will not see a lot of fancy symbols, pictures or equations. What you will get is pages upon pages upon pages of matrices.I worked through all of this book in about four months. It's real strength is that it teaches you the nuts and bolts of concrete matrix machinery: Gaussian elimination, matrix inversion, taking determinants, constructing a basis, extracting eigenvalues and eigenvectors, calculating functions of matrices and orthonormalization. Along the way you will learn a little about linear operators, but only a little. If you intend to do something with your mathematics though (as I intend to do physics) this stuff is important and is skimped in some of the more abstract texts. The proofs are short and easy to follow, a blessing for someone who is not mathematically gifted. There is also a lot of examples, a blessing for someone who is working alone.A warning, the authors heavy matrix approach doesn't seem adequate in the chapter on inner products. I got comfortable with all of the definitions and algorithms that go into it, but I was always iffy on proving anything, as if I was missing something. Maybe the approach just wasn't good for me.A further warning, you better be ready to do some hard core arithmetic. The problems get longer

and longer when you work by hand and if you are prone to arithmetical errors (as I am) you can find yourself spending days on simple problems. It gets tiresome, but it comes with the territory.In sum, highly recommended for what it does. I'm now ready to take on Axler and Shilov.

On my desk right now, books by: David C. Lay, Terry Lawson, Sheldon Axler, Klaus JÃƒÂ¤nich, Robert Valenza, and this one by Schneider and Barker. I tend to go back again and again here.I'm using this book as a supplement for the textbook in my class. Some of the books cited above don't quite fit the bill because they're so different from the linear algebra for engineering you so often see in classes. But this one is excellent for a matrix-heavy approach.This book is "bare bones", indeed, but it is very well written. Some might not be used to definitions, propositions, theorems and lemmas but in this case this makes it a whole lot easier for finding (and referencing) the important results. The notation is careful and formal, but the explanations are crystal clear. On the back cover it says it's geared towards students "outside the field of mathematics" but I think they say that because it avoids a purely algebraic approach (like in Valenza where e.g. Ker is defined in the context of group homomorphism). The approach is the one of matrixes, matrixes everywhere (row echelon algorithm, etc.) There are, however, no "modern" applications (such as networks, or ecology) as examples.Another reviewer complained about the difficulty in exercises. While you have "drill" ones, you do have more conceptual ones, but I think they're on par with the text. There are no pretty illustrations here, and you will see that you don't need them.In some other books, material might be presented in a wordy manner, but in this book, you just say "ah, so what so-and-so is saying is just Theorem number X.X.X in S&B."On the whole, this is an excellent acquisition for your undergraduate library. It is cheap and good. What more do you want?

and Applications (Graduate Texts in Mathematics) Matrices and Transformations (Dover Books on Mathematics) Physical Properties of Crystals: Their Representation by Tensors and Matrices Applications of the Theory of Matrices (Dover Books on Mathematics) Conceptos matemÃƒÂ¡ticos - IntroducciÃƒÂ n a las matrices (Spanish Edition) The Little Book of Permutation Matrices Calculus, Vol. 2: Multi-Variable Calculus and Linear Algebra with Applications to Differential Equations and Probability Linear Algebra and Its Applications (5th Edition) Linear Algebra and Its Applications, 4th Edition Differential Equations and Linear Algebra (4th Edition) Differential Equations and Linear Algebra