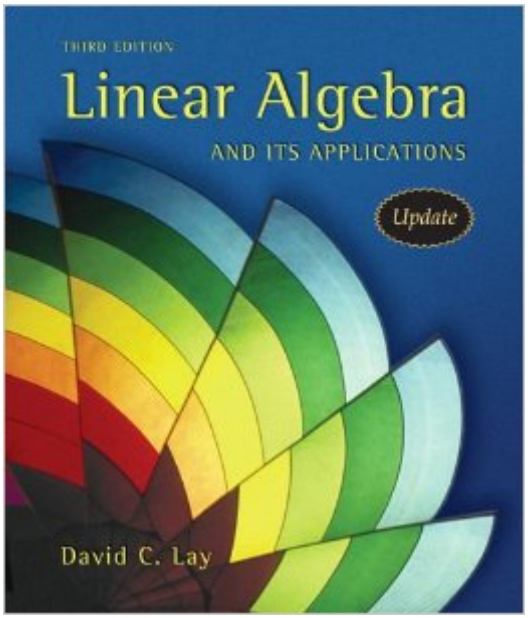
Linear Algebra And Its Applications, 3rd Updated Edition (Book & CD-ROM)



Synopsis

Linear algebra is relatively easy for students during the early stages of the course, when the material is presented in a familiar, concrete setting. But when abstract concepts are introduced, students often hit a brick wall. Instructors seem to agree that certain concepts (such as linear independence, spanning, subspace, vector space, and linear transformations), are not easily understood, and require time to assimilate. Since they are fundamental to the study of linear algebra, students' understanding of these concepts is vital to their mastery of the subject. Lay introduces these concepts early in a familiar, concrete Rn setting, develops them gradually, and returns to them again and again throughout the text so that when discussed in the abstract, these concepts are more accessible.

Book Information

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Customer Reviews

I am just finishing up an introductory Linear Algebra course using this book. I am a mechanical engineering student, and not a math major, so keep that in mind when reading this review.I personally really liked Lay's approach and writing style. The first chapter is a basic overview of linear algebra and helps you start to see what linear algebra is all about immediately.I also like Lay's method of highlighting important theorems and definitions. He uses a light blue background for theorems and key ideas and a greenish type color for definitions. Very helpful for studying and you don't have to dig through the text to find the main topics. There is also a glossary, something that seems kind of rare in math textbooks and I really liked having.I liked the practice problems before each problem set, they were kind of like examples, except the solution was on a different page.

Also, row operations in this text always work out nicely, which means I didn't struggle with difficult computations that need not be difficult and cloud the concept I was trying to learn.I didn't feel like there was enough problems. For each section there was about 10-20 problems computational problems, some true/false questions, and about 10-15 or so questions that either asked you to prove things or were applied problems. I wish there was twice the amount of problems, I'm the kind of student who needs lots of practice.The invertible matrix theorem should of been summarized in its entirety somewhere. Its scattered across 6 sections in 5 different chapters.I feel the book is really good for engineering students and applied math majors. Pure theoretical math majors, I could see how you might not like this book.

I'm familiar with three linear algebra textbooks: Gilbert Strang's Linear Algebra and Its Applications, Georgi E. Shilov's Linear Algebra, and now this one. It was recommended to me by one of my brothers, who had the author as a professor at the University of Maryland - College Park.Gil Strang's book is very well regarded, and I like it, too. However, as a writer, Strang tries a little too hard to be friendly and colloquial. As a result, some of his explanations are less clear than they need to be. It helps that videos of his linear algebra lectures are on the Web at [...], and those lectures clarify some of the "folksy" wording in the textbook. Strang obviously loves his subject and knows it thoroughly, but those qualities, however admirable, do not substitute for clear writing.Georgi E. Shilov's book is also highly regarded, by me as well. Shilov is one of those no-nonsense Russian mathematicians who's all about the subject and doesn't care if you like him or not. As a result, his writing is very clear and straightforward, albeit a little stiff and formal even in translation. The great virtues of Shilov's book are that the writing is clear and it's very rigorous: in fact, a reader would do well to have some familiarity with abstract algebra before starting it. But the book's virtues are also its weakness: because of the rigorous treatment, Shilov offers considerably less conceptual hand-holding than Strang.

I have heard students complain about how unhelpful this book is and professors complain that it is too easy.I strongly disagree with both.I am very well acquainted with the following introductory texts: Strang, O'Nan, Leon, Larson and Lay. As a student, I learned initially from the O'Nan text, then transferred colleges and had to repeat the class with the Strang text. As a professor, I have taught out of the 3 remaining texts. I have also examined the text written by Kolman.Lay's Ch. 1 is an extraordinary result: he creates an overview that unites all the main ideas that comprise linear algebra.No other text I know of comes near the breadth or clarity he achieves in this opening

chapter. This chapter alone makes the book worth owning.I also want to answer those who attack the Student Study Guide. It one of the few I have seen that is actually written by the author. It is likewise excellent and provides answers and hints for all the most critical problems in the text. I highly recommend it as well. I require it when I teach using the Lay text.I have convincingly achieved my best classroom outcomes using the Lay text. I have actually covered most of the first 6 chapters and the first 2 sections of Ch. 7 at the junior college level in one semester with a decent group of students who were often slowed down by a group of underachievers in the class.In summary, students who do not like this book will be hard pressed to find anything better- just pick up one of the competing texts used in colleges today and try to read it. Lay is by far the most 'user-friendly' text, he is clearly attempting to engage his readers.