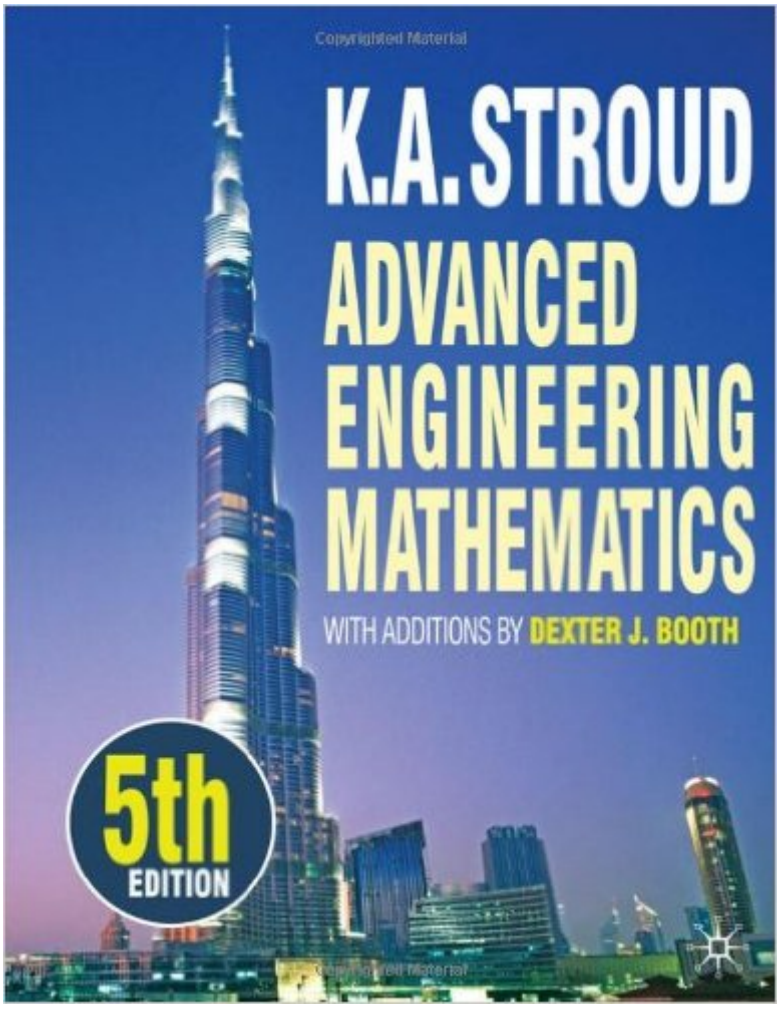
Advanced Engineering Mathematics, Fifth Edition



Synopsis

Revised, expanded, and extremely comprehensive, this best-selling reference is almost like having your own personal tutor. You proceed at your own rate and any difficulties you may encounter are resolved before you move on to the next topic. With a step-by-step programmed approach that is complemented by hundreds of worked examples and exercises, Advanced Engineering Mathematics is ideal as an on-the-job reference for professionals or as a self-study guide for students.Uses a unique technique-oriented approach that takes the reader through each topic step-by-step.Features a wealth of worked examples and progressively more challenging exercises.Contains Test Exercises, Learning Outcomes, Further Problems, and Can You? Checklists to guide and enhance learning and comprehension.Expanded coverage includes new chapters on Z Transforms, Fourier Transforms, Numerical Solutions of Partial Differential Equations, and more Complex Numbers.Includes a new chapter, Introduction to Invariant Linear Systems, and new material on difference equations integrated into the Z transforms chapter.

Book Information

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Customer Reviews

If you want a good basic collection of problems and your math book does not have solutions, this is a good place for you to start.I wish more US textbooks published the worked solutions to all of their problems. While academic types tend to disagree with this approach saying that it diminishes the student’s ability to reason, I must take exception to this.Using good worked examples allows a math "consumer" (such as an undergraduate engineer) a way to build his/her confidence.Those of us working in industry do not need proofs or generic problems picked for the benefit of the teacher

(with "easy" numbers or solutions that fit easily into a template). Proofs are for applied mathematicians and those working in the more theoretical areas of engineering (or doing PHD work). We need good tools and mathematics (when intelligently applied) can help us.This book tends to demystify some of the more arcane subjects for the reader.

This book is the sequel to Stroud's excellent "Engineering Mathematics", which focused on the undergraduate engineer and the math that he/she should know by graduation. This book continues on with crystal-clear discussions of numerical methods, linear algebra including the singular value decomposition and its uses, linear programming methods, multiple integration, and partial differential equations, to name a few of the topics covered. Just because the mathematics is more advanced in this book does not mean that it is any less clear than its less advanced predecessor. Stroud continues his tradition of holding your hand and leading you through every question you might have about working various types of math problems. I particularly liked his coverage of partial differential equations and numerical linear algebra topics. That is because it is hard to find advanced math books on these topics that are not written by pure mathematicians. Thus most of those books have a tendency to go overboard on proofs and not focus on the practical matters engineers must know in order to solve problems. The only negative thing I can say about the book is that it references Stroud's other book on engineering math, "Engineering Mathematics", during some of the explanations, possibly putting you at a disadvantage if you don't have it handy. I highly recommend this book as a reference every engineer should own.NOTE: For some strange reason this review of "Advanced Engineering Mathematics" is appearing under that book and also "Vector Analysis" by the same authors. This is NOT a review of "Vector Analysis", just to clear up any confusion!

This is the sequel to the authors' Engineering Mathematics. It follows the same programmed instruction approach which is so effective in their earlier book. Students who like this approach and the earlier book should also own this book. It delves into more engineering mathematics topics like Laplace Transforms, 2nd-Order Differential Equations and Complex Numbers. All in all, a good book to study engineering mathematics.

The text is designed to meet the specific needs of engineering students who needs adanced math to complete their degree.The text is written for self-study and is completely self-contained.I think that the Advanced Engineering Mathematics text definitely has all of the math you could expect to use in

electrical engineering.The nicest part of the text is the fact that the authors use bite-sized chunks of information.You will not get fancy derivations or cute stories at the beginning of the chapter.If you want all types of physical insight or mathematical modeling,this is not your book. If you are like most engineers and need to make it past this material,then the "cookbook" like feel of the text is exactly what you need.

Useful for Engineering math. If you have to use step functions, second order differenital equations , Get this book. I used it and i got great marks for math. I think any book by K.A. Stroud is fantastic. This book has sets of questions and fully worked out answers. As with most math,theres lots of short cuts in math. Laplace transforms show you that theres a quick solution to second order or higher ,differiential equations. Being fast at this allows you to solve control theory questions quickly.

This along with Stroud’s other book "Engineering Mathematics" really do seem to be the only pure math books an engineering undergrad needs. Very well written and just enough hand holding to get you up and running quickly, but not so much as to stunt your progress.My only issues with these books is that they’re British and as such use different terminology making it slightly difficult to find certain techniques at times. The other complaint I have (tongue in cheek) is that this makes it all the more annoying to have purchased about a thousand dollars worth of math texts when this is really all I needed. Further proof that the textbook industry is a scam.Seriously though, if you think you need something like this, buy THIS BOOK and it’s companion. They’re that good.

For anyone wanting to learn the subject on their own - this is the way to go.

I purchased this book after having purchased, read and enjoyed two of Stroud’s other books on Complex Variables and Differential Equations. Based on the excellent quality of those two books I purchased Advanced Engineering Mathematics by Stroud and Booth. I was not disappointed. I can describe the book in two words. "Simply Outstanding". I really like Stroud’s approach. He writes tutorials that are easily read and understood. The format of his books takes some getting used to but the content and the way it is presented couldn’t be better. This particular book is organized such that it can easily be used as an desk top reference. This is because most of the chapters or "programmes" as Stroud calls them, are either stand alone or are part of a two or three chapter set that can be treated as stand alone references to a particular subject. Knowing what I know now, would I purchase this book again? The answer is yes, the money was well spent.

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