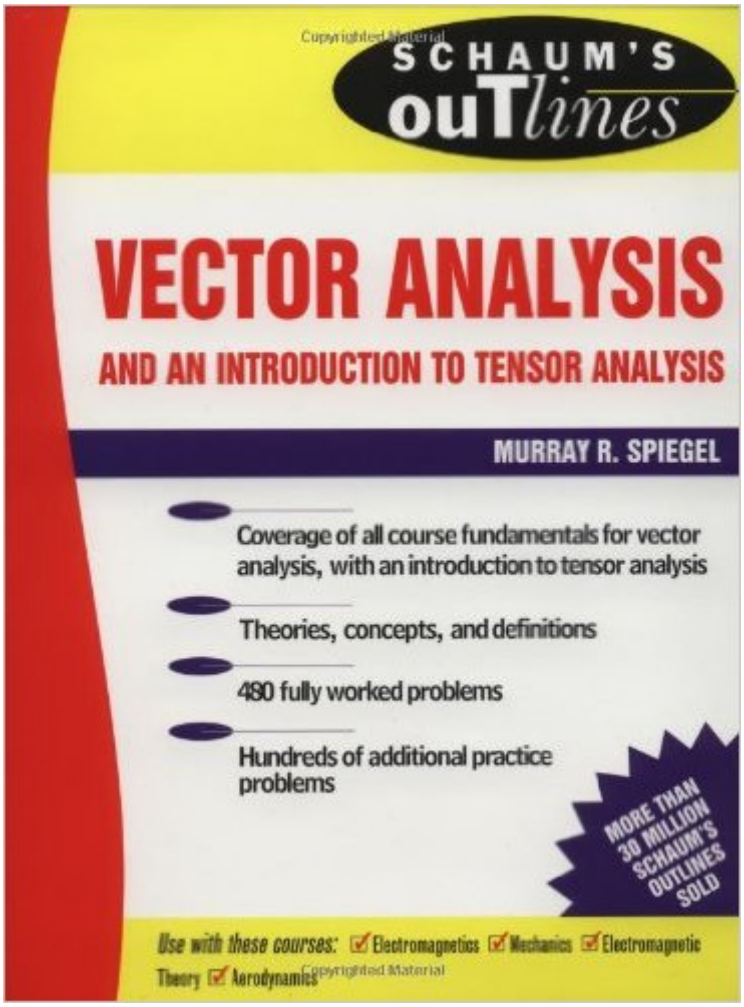
Schaum's Outlines Vector Analysis (And An Introduction To Tensor Analysis)



Synopsis

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Customer Reviews

The one published in 1959 deserves to be one of the finest books written about vectors .The way it deals with the subject prepare the reader smoothly in mastering the basics of vector analysis, its for the engineer, physicist and mathematician.By the way the full name of the book is "Vector Analysis and an Introduction to Tensor Analysis"

Although this series of books is intended to supplement a class textbook, this one is pretty good in helping you learn vectors by itself. It explains all the terminology and gives you quick examples.For

the problems here, there are some solved problems, which walk you through the process of finding the answer. The supplementary problems, to help you test your knowledge, have the answers there. This used to bother me because I wanted to see if I could get the answer. Here, the author is just trying to help you master the process. You can always cover up the answer.Topics in this volume include tensor analysis, curvilinear coordinates, vector integration and differentiation, integral theorems, and dot and cross product. All are helpful and easy to understand.

This is great as a preparatory or supporting text. I worked through virtually all of the 'supplementary' problems and found the chapters on curvilinear coordinates and tensor analysis very useful preparation for the study of General Relativity texts. Major parts of Landau and Lipschitz 'Classical Theory of Fields' and many other texts were readily accessible after doing the sums from Spiegel. Eminently suitable for independent study.

I love this book. I've owned three copies of it over the years and I can honestly say that I would not have achieved the final class of degree in Physics that I did without it.The learning curve is very gentle - really nothing is assumed about the reader's background beyond basic integral and differential calculus. The concepts of vectors are introduced one by one, and the book builds logically towards its final stages (introductory tensor analysis) via, inter alia, dot and cross products, partial differential operators on vector spaces (grad, div, curl, Laplacian etc.), line and surface integrals (along with vital allied therorems such as Stokes' and Green's theorems), and general theory of curvilinear coordinate systems (in which the differential operators are refined and generalised).This book is absolutely ideal for an undergraduate course in Physics, Electronic Engineering or Vector Analysis.

I have generally found the Schaum's Outline Series quite helpful as a supplement to standard math and physics textbooks. The Vector Analysis problem review set was particularly useful. Only rarely did I encounter a problem in which the solution was not clearly laid out. More complex problems often referenced earlier problems, allowing me to review simpler problems if necessary. The chapters on Curvilinear Coordinates and Tensor Analysis are a bonus and serve as useful references for more advanced studies. Given the relatively low cost of this problem set, I recommend buying the Vector Analysis problem set.

I own many Schaum's outlines, and several by Mr. Spiegel, the author of this book. Mr. Spiegel's

outlines have always been among the most excellent of the Schaum's outline series and this one is no exception.This book is so clear and complete it can stand alone as a textbook in vector analysis, and it is much cheaper than all of the alternatives. Besides being of help to students in pure mathematics, it should also prove helpful to students of physics, mechanics, and especially electromagnetic theory, where visualization of problems and conversion of that visualization into equations that can be solved are the hardest parts of the course. This book will help with all of that.Topics include the algebra and differential and integral calculus of vectors, Stokes' Theorem, the divergence theorem, plus other integral theorems together with applications drawn from many fields. There is also additional material on curvilinear coordinates and tensor analysis that will be very helpful to students of advanced engineering, physics, and mathematics. Highly recommended for anyone who has already had two semesters of calculus.

This book is a no-frills guide to the heart of vector analysis that should accompany your textbooks on mechanics, thermodynamics, and relativity.

I have been using this book in conjunction with Stewart's Multivariable Calculus (a book that fails in many aspects) for my Multivariable Calculus class. This explains vector operators much better than Stewart does, and for a little over $12, that is less than 1/10 of the price of Stewart.The quality of print in this edition is excellent. The reviewer below must have found a very old edition of this book in the library somewhere. Spiegel is good at explaining things, and helpful references like vector differentiation/integration tables are summarized and included.Overall, well worth the money.

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