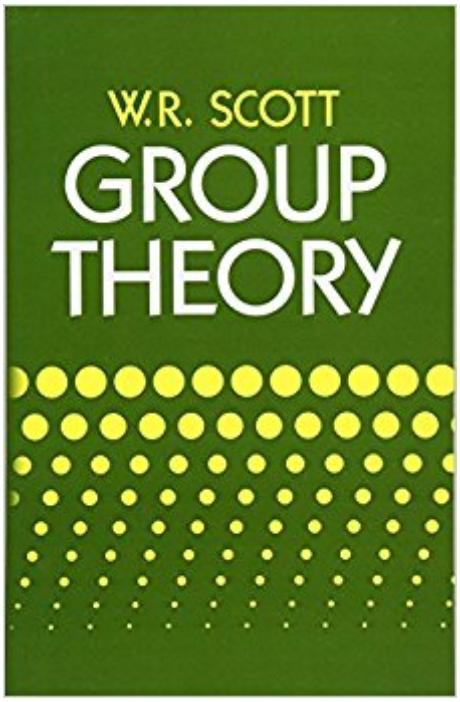
Group Theory (Dover Books On Mathematics)



Synopsis

Well-organized and clearly written, this undergraduate-level text covers most of the standard basic theorems in group theory, providing proofs of the basic theorems of both finite and infinite groups and developing as much of their superstructure as space permits. Contents include: Isomorphism Theorems, Direct Sums, p-Groups and p-Subgroups, Free Groups and Free Products, Permutation Groups, Transformations and Subgroups, Abelian Groups, Supersolvable Groups, Extensions, Representations, and more.The concluding chapters also cover a wide variety of further theorems, some not previously published in book form, including infinite symmetric and alternating groups, products of subgroups, the multiplicative group of a division ring, and FC groups.Over 500 exercises in varying degrees of difficulty enable students to test their grasp of the material, which is largely self-contained (except for later chapters which presuppose some knowledge of linear algebra, polynomials, algebraic integers, and elementary number theory). Also included are a bibliography, index, and an index of notation.Ideal as a text or for reference, this inexpensive paperbound edition of Group Theory offers mathematics students a lucid, highly useful introduction to an increasingly vital mathematical discipline. It will be welcomed by anyone in search of a cogent, thorough presentation that lends itself equally well to self-study or regular course work.

Book Information

Series: Dover Books on Mathematics

Paperback: 512 pages

Publisher: Dover Publications (July 21, 2010)

Language: English

ISBN-10: 0486653773

ISBN-13: 978-0486653778

Product Dimensions: 5.4 x 1 x 8.5 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: 3.0 out of 5 stars 6 customer reviews

Best Sellers Rank: #649,565 in Books (See Top 100 in Books) #87 inÃ Â Books > Science & Math > Mathematics > Pure Mathematics > Group Theory

Customer Reviews

This is a very well-organized presentation of the core results, and then some, of Group Theory. There are a wide variety of Groups and an equally wide variety of books on Group Theory. This one is for the reader who wants things presented in a logical order with minimal digressions beyond

what is logically required. It is a little dated and does not cover some techniques such as Groups acting on a set. I go to this book when I want to refresh myself on some basic results or am looking for a particular result. If this is your first encounter with Groups you probably need an instructor plus the book, so beginners who are not natural mathematicians beware. A plus for the book is the numerous and stimulating exercises. If you can do them all you are well on your way to becoming a mathematician.

Scott is rooted in the rigorously linear approach to proof techniques so traceable to Hardy et. al.. A little redundancy would have been welcome but the exposition is for mathematicians, not physicists or computer scientists; bear with it; at least sketch every problem, formulate your own examples. If you wish a cursory introduction to groups this ain’t it.

NOTE:The two books I make reference to here were purchased from .I recently bought ’Advanced Calculus’ to replace one that I lost which was superior to this recently purchased Advanced Calculus book. The first chapter of this book was about ’sets’. I returned because if I wanted to read about sets I would have bought one about sets.Now about the ’Group Theory’ book. A much BIGGER disappointment. Since Group Theory is based on sets it would have been very appropriate for this book to cover Sets first. No, instead it starts immediately with set concepts on the very first page as if this was a continuation of a lecture on Advance Group Theory from the day before. I’m still looking for a Group Theory book that starts at the beginning. Don’t buy this book unless you were ’present in the lecture the day before’

This book is fantastic in my opinion. The ball gets rolling right away, and proceeds in a concise, rigorous fashion all the way to the end. "Pedantic" would be precisely the wrong word to describe the book. "Rigorous" is more like it. It doesn’t bother for one second with the "hold my hands..." approach and certainly wastes no time on extraneous motivational stuff. For that, perhaps one should try Tony Robbins.As a physicist, I first learned group theory from Tinkham’s excellent "Group Theory and Quantum Mechanics," also a Dover, which is geared on all cylinders toward physical applications. There are times however, I want nothing but mathematics in all its stirling beauty. Definitions -> logic -> theorems. No namby-pamby stuff.I had such a great time reading this book. If you have a soft spot for the prestineness of mathematics, I suspect you will enjoy this book as much as I did.

"Group Theory" (W.R.Scott) is an excellent textbook, with an axiomatic, temperate style which avoid useless gossiping; thanks to such concision, this book contains numerous results generally missing in other courses on the same subject, and often emphasizes interesting variations of some theories.A great deal of investigation exercises complete this reference work. To my opinion, this book should be recommended to anyone who wants to begin studies on group theory.

This is probably the worst book on Group Theory a beginner could buy. If you're not a beginner, the book is dated and quite pedantic. The book lacks historic motivation, it lacks algebraic and geometric motivation, it lacks combinatorial and number-theoretic motivation -- so what then is it's motivation? Good question. It even lacks a comprehensive bibliography. If E. Galois was alive, I'm sure he'd ask for a duel with W.R. Scott for the pedantic way he's treated the subject. But don't expect to even find one paragraph about E. Galois in this book, It's utterly devoid of historic comment.I give this book two stars because it's a cheap Dover edition, and as such doesn't hurt the pocket book much. But trust me, there is no want of better books on the subject. Try the classics on Group Theory by Hall, Kurosh or Zassenhaus before you try this one.

Application of Group Intervention Alfred’s Basic Group Piano Course, Bk 1: A Course Designed for Group Instruction Using Acoustic or Electronic Instruments (Alfred’s Basic Piano Library) Wild at Heart: A Band of Brothers Small Group Participant’s Guide (Small Group Resources) Mathematics and the Imagination (Dover Books on Mathematics) One Hundred Problems in Elementary Mathematics (Dover Books on Mathematics) Mathematics for Quantum Mechanics: An Introductory Survey of Operators, Eigenvalues, and Linear Vector Spaces (Dover Books on Mathematics)