

Introduction to Linear Algebra, by Frank M. Stewart. D. van Nostrand Co., Inc., Princeton, 1963. xv + 281 pages.

This is a carefully written, well thought out book which can be used successfully for either an elementary, introductory course in linear algebra for students with no background in the subject or for a more sophisticated course for students who may already be familiar with some of the computational aspects of matrix theory. Features of this book include: the determinant is developed in terms of multilinear forms and then, in a completely separate and independent chapter, is redeveloped using the classical approach; appendices on basic logic, sets, proofs, functions, etc. are provided and are referred to throughout the text by marginal footnotes; there is an index of symbols as well as a general index and a table giving the page number for each theorem, definition and corollary.

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Introduction to Topological Groups, by Taqdir Husain. W.B. Saunders Co., Philadelphia and London, 1966. xi + 218 pages. \$8.10.

This is an introductory text on topological groups. Except for Chapters II and V, much of the material is standard. The semitopological groups studied in Chapter II are groups endowed with a topology so that only the multiplication is continuous in each variable separately. One finds here several conditions for a semitopological group to be a topological group. Chapter V is an unusually thorough discussion on open homomorphisms and closed graph theorems.

The existence and essential uniqueness of the Haar integral are proved in Chapter VI. Representations of compact groups are studied in Chapter VII, which includes a section on integral equations used in the proof of Peter-Weyl's theorem. In Chapter VIII, dual groups of locally compact abelian groups are introduced; Bochner-Weil's theorem on positive definite functions and the Plancherel theorem are proved. The last chapter is an introduction to Banach algebras.

As the book is intended to be an introduction to the theory of topological groups, several important topics (e.g., Gelfand-Raikov's theorem on unitary representations of locally compact groups, Pontryagin's duality theorem, the structure theorem for locally compact, compactly generated abelian groups) are not included. The book is clearly written and suitable for a beginning course on topological groups.

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