Introduction to the theory of bases, by Jurg T. Marti. xii+149 pages. Springer Tracts in Natural Philosophy, Vol. 18, Springer-Verlag, New York, 1969. U.S. $8.80.

This concise volume (20 of its 149 pages are reserved for the bibliography and the table of content) deals almost exclusively with the rather specialized topic of bases in Banach Spaces. Some known extensions of the results to more general linear topological spaces are gathered in the last chapter of the book, but it is fair to say that foremost in the author's mind is the theory of bases in separable Banach spaces. That this should be the case is not surprising—there still lies the unresolved conjecture of S. Banach. Thirty-eight years ago, S. Banach queried whether every separable Banach Space possesses a basis; no answer is yet available.

Anyone intrigued by this outstanding open problem or bold enough to tackle it, will find Marti's book a very handy source for the well-known results on the subject. In addition, the extensive bibliography should render the lesser known results easily accessible.

The book is very well organized and quite readable for anyone familiar with only the most elementary knowledge of Banach Spaces. The first chapter summarizes (without any proofs) the definitions and basic theorems of functional analysis. In all the other chapters, the theorems are proved in great detail. Ch. II treats the various types of convergence of series in Banach Spaces and contains the proofs of the Orlicz–Pettis theorem, which links convergences in the weak and strong topologies, and of the Dvoretzky–Rogers theorem, which asserts that, in the case of infinite dimensional Banach Spaces, absolute convergence is not implied by unconditional convergence. Ch. III, IV and V present the theory of bases in Banach Spaces, and in addition, one finds here a neat summary of the well-known examples of bases for the standard spaces. Bases in Hilbert space are dealt with briefly in Ch. VI. What some authors refer to as "bases of subspaces" are called "decompositions" by Marti. They are discussed in Ch. VII and applied to the theory of Banach Algebras in Ch. VIII. Finally, Ch. IX presents the extension of the theory to more general linear topological spaces.

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Creep problems in structural members, by Yu. N. Rabotnov. xiv+82 pages. (Translation from the original Russian.) North-Holland, Amsterdam, Series in Applied Mathematics and Mechanics, 1969. U.S. $33.60.

This scholarly work combines, in an uncommonly comprehensive way, the mathematical and technical aspects of the theory of creep, the concern of which is understood to include "the totality of effects which can be explained on the assumption that the relationship between stress and strain is time-dependent." In the first