modular functions, the generalized principal ideal theorem, and the cohomology of algebraic number fields. There are papers on algebraic geometry, especially on algebraic and abelian varieties, and several papers touching to some degree on number theory. A special emphasis was laid on possible extensions of the class field theory, and several papers deal with a generalization of the theory of complex multiplication. A detailed review paper by paper is not appropriate here, but to give some idea of the outstanding group of mathematicians participating in the Symposium and contributing to this volume, we list the nineteen authors of the major papers in the order of their appearance: A. Weil, G. Shimura, Y. Taniyama, M. Deuring, E. Artin, R. Brauer, K. Iwasawa, T. Tannaka, T. Nakayama, T. Kubota, K. Yamazaki, K. G. Ramanathan, I. Satake, C. Chevalley, A. Néron, Y. Nakai, J.-P. Serre, M. Nagata, and D. Zelinsky.

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Introduction to Finite Mathematics. By John G. Kemeny, J. Laurie Snell and Gerald L. Thompson, Prentice-Hall, New Jersey, 1957. 372+xi pp., $5.00.

In the growing tide of new elementary texts, this one stands out as the most radical, and to my mind happy departure from tradition. No warming over of high school algebra or gentle calculus background this volume, but a substantial dose of modern topics based upon *finite* sets. The five core chapters are: compound statements, sets and subsets, partitions and counting, probability theory, and vectors and matrices. Careful organization and efficient use of concepts is obvious throughout, giving the exposition a quality reminiscent of more advanced texts. The transition from this book to later courses should be smoother than usual, but the transition to the book itself is another matter.

The authors, although careful to include many examples and problems, may have gone too far in the direction of sophistication: the style, precise and simple, is spare. For example, there are unembellished definitions such as "A *column vector* is an ordered collection of numbers written in a column."—the first sentence of Chapter 5. But, let it be recorded, the Dartmouth freshmen on which the text has been *successfully* tested were not specially selected. However, their instructors were the authors, and the lectures, no doubt, richly supplemented the text. Good lectures—always desirable—may well be necessary when using this book.

The book is also intended for those increasingly common behavioral science graduate students who sense a need to know some mathematics. For them there are two chapters of applications, covering aspects of linear programming and two-person game theory and nontrivial topics from sociometrics, genetics, learning theory, anthropology, and economics.

The main fault of commission is, I believe, the attempt to discuss without sufficiently clear delineation the notions of measure, relative frequency, and credibility of statements in the probability chapter. The book's main omission

The American Mathematical Monthly, Vol. 64, 1957, pp. 688-689.

(especially unfortunate for the behavioral scientists) is that collection of ideas, beginning with product sets, and including relations, orderings, functions, and axiomatic applications such as utility theory.

In sum, even though I have some specific reservations, I would commend this among beginning texts as an exciting and remarkably successful attempt to tap a different, and clearly important, lode of mathematics. Its influence should be widely felt, even though it may be deemed too mathematically mature for some freshmen courses.

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Mathematics of Finance. By Hugh E. Stelson. Van Nostrand, Princeton, N. J., 1957. xii+327 pp. $5.50.

This book differs from the usual mathematics of finance text in its treatment of both the nontechnical and the theoretical aspects of this subject. Its emphasis on the practical viewpoint may be indicated by its realistic discussion of "Consumer Loans," "Buying a Home," "The Nature of Life Insurance." These are the headings of three of the book's fifteen chapters. The basic ideas of these topics are presented simply and clearly. The book's attention to technical details and soundness of theory may be indicated by the unusually large number of footnotes. There are twenty footnotes to literature alone, and many others which provide explanatory comments or details for proofs.

The book is well-written in a concise style. The paragraphs are exceptionally short, yet the explanations are clear and sufficiently detailed. All the standard topics in the mathematics of finance are included and treated competently. There is an adequate number of realistic examples and exercises. Each chapter ends with a list of formulas and symbols. The tables are excellent. Eight of the ten tables included are reprinted from Glover's *Tables of Applied Mathematics*.

The preface and the introduction to Chapter 15, which is a review of "Preparatory Topics from Algebra," imply that the students using this text should be well-grounded in algebra. In addition, familiarity with limits is needed for the sections on perpetuities and continuously convertible interest. Also, a knowledge of calculus is essential for the chapter on "Continuous Annuities." However, the author indicates in the preface that all of these portions of the text, along with some others, "can be omitted for a short course with emphasis on applications."

On the assumption that college algebra is a minimum prerequisite for the course in mathematics of finance, the reviewer considers that Professor Stelson has accomplished his purpose of preparing an excellent text for students in mathematics or business administration.

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