

The reviewer is pleased to announce that the belated appearance of this review is solely due to the belated appearance of a review copy in the editorial office of this journal.

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1. C. L. BAKER & F. J. GRUENBERGER, *The First Six Million Prime Numbers*, The Rand Corporation, Santa Monica, published by The Microcard Foundation, Madison, Wisconsin, 1959. Reviewed in *Math. Comp.*, v. 15, 1961, p. 82, RMT 4.

2. D. H. LEHMER, "Tables concerning the distribution of primes up to 37 millions," 1957, ms. deposited in the UMT file and reviewed in *MTAC*, v. 13, 1959, p. 56-57, RMT 3.

**74[G].**—LUDWIG BAUMGARTNER, *Gruppentheorie*, Walter de Gruyter & Co., Berlin, 1964, 190 pp., 16 cm. Price DM 5.80 (paperback).

This is the fourth edition of a compact textbook on group theory, which first appeared in the year 1921. Though there is probably not a single sentence in common to the two editions, the book has retained the pedagogical skill of the exposition and of the many exercises (now 151) illustrating the concepts developed in the text in unbroken sequence.

The content of the present edition may be characterized as a substantial portion of the union of the textbooks on group theory by A. Kurosch and by the reviewer (first edition) emphasizing basic concepts, but not considering transfer theory, lattice theory, extension theory, theorems on not finitely generated abelian groups, etc. The attractive historical references and sections on geometric groups of the first edition have given way to a treatment of group theory governed entirely by the restrained abstract viewpoint of the thirties and forties. The group tables appended to the book are very useful for teaching and self-study purposes.

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**75[G].**—C. A. CHUNIKHIN, *Podgruppy Konechyykh Grupp (Subgroups of Finite Groups)*, Nauka i Technika (Science and Technology), Minsk, 1964, 158 pp., 21 cm. Price 57 kopecks.

In honor of the ninetieth anniversary of Sylow's theorems (1872) the author devotes a four-chapter monograph to the exposition of the known theorems of finite group theory about the existence of subgroups of given order of a finite group  $G$ , starting with Sylow's theorem on the existence of  $p$ -subgroups for every  $p$ -power divisor of the order of  $G$  and the conjugacy of the Sylow  $p$ -groups under  $G$ , continuing with P. Hall's theorems on  $\Pi$ -subgroups of solvable groups ( $\Pi$  a given set of prime numbers), and concluding with a detailed exposition of the author's results contained in more than 30 research papers.

In Chapter I the known generalizations of Sylow's theorems on  $p$ -groups to the corresponding theorems on  $\Pi$ -groups are studied. In Chapter II the factorization of the finite groups utilizing the indices of the principal or composition series is treated. In Chapter III the construction of the subgroups of a finite group, with the help of the "indexials", is discussed. Given a principal chain  $G = G_0 \supseteq G_1 \supseteq \dots \supseteq G_\mu = 1$  ( $\mu \geq 1$ ) of  $G$  and a chain of subgroups  $F_i | G_i$  of  $G_{i-1} | G_i$  for  $i = 1, 2, \dots, \mu$  such that any conjugate of  $F_i | G_i$  under  $G | G_i$  already is a conjugate