

BRIEF MENTION

Moderne Algebra. By B. L. van der Waerden. Vol. 1, 3d. ed. Springer, Berlin, 1950. 8+292 pp.

Modern algebra. By B. L. van der Waerden. Vol. 1. Trans. by Fred Blum. New York, Ungar, 1949. 12+264 pp. \$5.50.

Modern algebra. By B. L. van der Waerden. Vol. 2, Trans. by T. J. Benac. New York, Ungar, 1950. 9+222 pp. \$5.00.

Volume 1 of the third German edition of this basic text remains in essence the same as in the previous editions. Sections 42 and 60 have been dropped from the second edition; some simplifications and fuller explanations have been introduced in the definitions of polynomials and norms and traces; some exercises are modified or replaced by new ones. But there are two major changes: (1) the reintroduction of the axiom of choice, well-ordering, and transfinite induction (as in the first edition) with the resulting elimination of denumerability hypotheses for the existence of algebraic closures and real closed fields and finiteness hypotheses in the Steinitz theory of extension fields; (2) an expansion of the theory of valuations with more detail on valuations of algebraic extensions (in particular of the rational field) and the addition of three sections on valuations of function fields.

The two volumes in English are a translation of the second German edition (1937) with the exception of some additions and revisions by the author in vol. 1 on the subjects of polynomials (as in the German edition treated above) and valuations of algebraic number fields. The translation of vol. 2 is very readable. Unfortunately the translation of vol. 1 suffers from clumsiness of English style, some literal translations of German terms where standard English terms would be preferable or necessary, occasional inconsistencies, and some simple errors. The reader would be warned especially about chap. 10 which is full of too literal translations, particularly the erroneous use of "perfect" for "complete"—and this error is not made consistently. In any case, van der Waerden is now available to the student who reads only English, though he will miss some of the lucidity in vol. 1.

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Généralités sur les probabilités. Éléments aléatoires. By Maurice Fréchet. 2d ed., rev. and enlarged, with a note by P. Lévy. Paris, Gauthier-Villars, 1950. 16+355 pp.

The second edition of this book is essentially the same as the first [reviewed in Bull. Amer. Math. Soc. vol. 43 (1937) pp. 602-603]