two systems. Along with the theory given by von Neumann, the author gives his generalization of the theorem of G. Birkhoff and von Neumann, proved by those authors for the finite dimensional (projective) geometries.

The first appendix shows the equivalence of the axiom of choice, the well-ordering theorem, and Zorn's Lemma; the second appendix gives various ways (all equivalent) to define continuity of the lattice operations in a complemented modular lattice (some of these ways are more convenient for repeated use in proofs than others).

There is a footnote reference to the remarkable discovery of I. Kaplansky that every complete complemented modular lattice which is orthocomplemented is necessarily continuous but there is no other reference to work done in the field of continuous geometry after 1951.

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Théorie des ensembles (Chapter III). By N. Bourbaki. Actualités Scientifiques et Industrielles, no. 1243, Paris, Hermann, 1956. 118 pp. 1500 fr.

This third chapter of Bourbaki's set theory is entitled *Ensembles ordonnés. Cardinaux. Nombres entiers.* The text deals in the Bourbaki fashion with those elementary parts of these subjects that are needed in the later books of the Bourbaki treatise, and is divided into six sections: 1. Order relations, ordered sets; 2. Well-ordered sets (including transfinite induction and the well-ordering theorem); 3. Equivalent sets, cardinals (including Cantor's theorem that $2^{\mathfrak{a}} > \mathfrak{a}$); 4. Finite cardinals, finite sets (including mathematical induction); 5. Operations with integers (including combinatorial analysis); 6. Infinite sets (including the theorem that $\mathfrak{a}^2 = \mathfrak{a}$ if $\mathfrak{a}$ is infinite).

About 35 of the 118 pages of the book consist of exercises, to which are relegated such important notions as order types, ordinal numbers, alephs, initial as well as regular, singular, indecomposable, and inaccessible ordinals, $cf(\alpha)$ (but not with the notation employed in the literature), and such a fundamental theorem as König's theorem (with no mention of König).

A student interested in learning set theory is likely to get more insight and inspiration from the classical texts on the subject; a working set-theorist will find H. Bachmann's *Transfinite Zahlen* more comprehensive, systematic, and a guide to the literature.

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