

Nichteuklidische Geometrie, Hyperbolische Geometrie der Ebene by R. Baldus, 4th edition, completed by F. Löbell. Sammlung Götschen No. 970-970a. Walter de Gruyter, Berlin, 1964. 158 pages. Price DM 5.80.

This new edition is not essentially different from the earlier ones. Since these, however, do not seem to be very well known on this continent the following brief review may be of interest. Like several other books of the Sammlung Götschen it is very readable and appeals to students from the point of view of its mathematical content as well as of its elegant style which may make it eligible as a text for those who wish to improve their German.

Apart from some concluding remarks in Part VI, the book deals with plane hyperbolic geometry only. The first part gives, on 13 pages, an historical survey. Part II introduces the reader into the main ideas of the axiomatic method; it contains Hilbert's axioms of the absolute geometry with some simplifications due to the author. Coordinates are introduced, based on the axioms of measurement. Euclid's fifth postulate, discussed in Part III, completes the system of axioms into that of euclidean geometry. Based on the reality of euclidean geometry, it is shown in Part IV how the axioms of absolute geometry can be realized also by denying the fifth postulate; from the various possibilities the author has chosen Klein's projective model of hyperbolic geometry where points are the points within a circular disk and lines are the chords of this circle. Part V, the longest of all, derives the fundamental theorems of plane hyperbolic geometry. Theorems on triangles are obtained by the method of the normal situation.

H. Schwerdtfeger, McGill University

Boolean Algebras, by Roman Sikorski. *Ergebnisse der Mathematik und ihrer Grenzgebiete (New Ser.)* Bd. 25. Second Edition, Springer-Verlag Berlin, Göttingen, Heidelberg. Academic Press Inc., New York, 1964. x + 237 pages. \$9.50.

This book appears in the "Ergebnisse" - series of Springer's. It is one of its many remarkable features that it could have appeared in a series of basic textbooks as well. It gives a complete account of the recent development of the theory, complete to an extent that the reviewer would be unable to mention a single essential result on the subject (disregarding axiomatic questions) not included in the text. Yet, nothing beyond pure set theory is presupposed, all basic notions are properly defined and illustrated by many examples, and all proofs are given in full (except in the appendix), so that one could hardly think of any better introduction to the subject.