

systems of coordinates, methods of mapping, linear transformations, and an exhaustive discussion of the linear complex, pencils of complexes and of reguli.

The remaining sections are devoted respectively to algebraic complexes, congruences, and ruled surfaces. The quadratic complex and systems of non-singular quadratic complexes are discussed in such detail as to supply a helpful addition to existing literature in the way of a hand-book. Congruences are nearly as fully treated, especially those contained in a quadratic complex. Applications to the Kummer surface are even better coordinated than in the existing textbooks.

The summary of algebraic ruled surfaces, comprising over a hundred citations, is exceptionally well done. Since it was written, the only important additions are the book of Edge and the essay of Wiman in the *Acta Mathematica*.

The report was published in the most trying post-war period. This explains the omission of three chapters: differential line geometry, geometry of the sphere, and the use of other space elements, each of which could contribute materially to the usefulness of the report.

VIRGIL SNYDER

*Algebraische Raumkurven und abwickelbare Flächen.* By K. Rohn and L. Berzolari. Band III 2 B, Heft 9. July, 1926. Pages 1229-1436.

This volume covers approximately a century of research on space curves and developable surfaces. The author is well fitted for the task, having been familiar with and a contributor to the field for more than a third of that time. There is an abundance of material and its arrangement shows very careful planning, for it reads more like a textbook than the source book it really is.

In some places the material is covered in full, in others it is barely sketched. However, in either case the reader is liberally supplied with references. The references given are frequently really footnotes as they contain additional and valuable information upon the subject.

The first two-thirds of the book deals principally with general properties of space curves and their developable surfaces. It begins with some definitions and representations of a space curve, and includes many of the fundamental properties resulting from these definitions. Singular points are introduced early, followed by the Cayley and other formulas. The geometry on a curve and the classification of curves are discussed at some length.

The latter third of the book deals primarily with particular curves and surfaces. Rational curves of order four, five, six, and seven, and irrational curves of order four, five, and six are discussed. Some other special curves as well as special systems of curves are also discussed.

AMOS BLACK

*Spezielle Algebraische Flächen.* By W. Fr. Meyer. a. *Flächen dritter Ordnung.* Band III 2, Heft 10. 1928. Pages 1437-1531; b. *Flächen vierter und höherer Ordnung,* Heft 11. 1931. Pages 1533-1779.

The discussion of cubic surfaces is divided into two parts. The first includes the older historic treatment, mapping, and the development of properties; the second part reviews the prize papers of Cremona and Sturm, and outlines