Anwendung der Differential- und Integralrechnung auf Geometrie. Von Georg Scheffers. Dritte, verbesserte Auflage. Volume 1: *Einführung in die Theorie der Kurven in der Ebene und im Raume.* Berlin and Leipzig, de Gruyter, 1923. x+482 pp. Volume 2: *Einführung in die Theorie der Flächen.* Berlin and Leipzig, de Gruyter, 1922. xi+582 pp.

The first edition of this book (1901, 1902) was discussed in this Bulletin vol. 7 (1900–01), p. 144 and vol. 8 (1901–02), p. 332. In the years 1910–1913 a second edition was published, in which the author had corrected his text in many points, especially under the influence of Study, whose papers of 1908 and 1909 (Jahresbericht and Transactions) had criticized Scheffers' book and the ordinary treatment of differential geometry in general. This third edition has not many points of departure from the second. Scheffers' book remains one of the best textbooks on the subject; it deals with the material in a very pedagogic way and illustrates it with many interesting examples. Complex values of the coordinates are treated carefully. The point of view of invariants is emphasized.

It belongs to the "older" type of book on differential geometry, so that the modern reader misses not only an application of vector methods, but also the more recent developments of absolute differential calculus, the parallelism of Levi-Civita, and, last but not least, the differential geometry "im Grossen," the "macroscopic" differential geometry. The only truly modern book on the subject is Blaschke, *Differentialgeometrie.*

Scheffers' book contains many historical footnotes. These are sometimes very interesting. They give, however, only a set of separated facts about the history of the theories. A history of the development of differential geometry is not given in Scheffers' book; in fact, it does not exist at all. This only would give the proper background to the historical notes.

D. J. STRUIK

Quellen und Studien zur Geschichte der Mathematik. Edited by O. Neugebauer, J. Stenzel, O. Toeplitz. Part B: *Studien.* Volume 1, Section 1. Berlin, Springer, 1929. 1–112 pp. RM 12.

This is the first number of the first volume of source material and studies in the history of mathematics, brought out under the editorship of O. Neugebauer of Göttingen, J. Stenzel of Kiel, and O. Toeplitz of Bonn. The first of six articles in this number is by Toeplitz and deals in a speculative way with mathematics in the writings of Plato. He opposes the thesis of A. E. Taylor (*Mind*, vol. 35, pp. 419–440; vol. 36, pp. 12–33) that Plato had evolved the concept of irrational number substantially as set forth in modern times by G. Cantor. Toeplitz sets up a thesis of his own, that Plato had an important ratio-concept playing a fundamental role in his general theory of ideas. Another article, by F. Solmsen, stresses the influence of Plato in the evolution of the mathematical method—the method which draws necessary conclusions. Stenzel discusses the logos of Aristotle.

Of great interest is Neugebauer's discussion of recently discovered Sumerian and Babylonian tablets which disclose not only a very early use of sexagesimal numbers and sexagesimal fractions, but also a knowledge of geometry not hitherto found in ancient Babylonian records. The area of a trapezoid is given.