of these rules to the classical calculus results in a system equivalent to Lewis' system S4. A related notion for possibility is also suggested. Consider a family of systems; $A$ is said to be possible in a system $S_1$ of the family in case it is provable in some stronger system of the family.

In making available in monograph form the important ideas of Gentzen, a definite need in the literature is filled. The work throughout gives meticulous attention to precise formulations and to detail in proof. It is almost entirely self-contained, and in spite of the great detail of the treatment should be of interest to the general mathematical public as well as to the specialist in foundations.

D. NELSON

*Lezioni di analisi.* By F. Severi and G. Scorza Dragoni. Bologna, Cesare Zuffi, 1951. Vol. 3, 6+255 pp. 2700 lire.

Volume 1 was written by the senior author alone and published by Zanichelli in 1933, it was reviewed by T. H. Hildebrandt in vol. 41, January 1935, of this Bulletin. A second edition appeared in 1938 and a third edition is in course of publication. Part 1 of volume 2 with G. Scorza Dragoni as coauthor appeared in 1943, but does not seem to have been reviewed in the Bulletin.

The present volume 3 contains a discussion of ordinary differential equations (existence and uniqueness theorem for single equations and for systems and problems in the large, mainly boundary value problems) followed by a chapter on trigonometric series and a brief discussion of the differential geometry of surfaces.

The main text gives a clear, fluent and rigorous account of the basic facts based on the Riemann integral. In each chapter, except the first, this exposition is supplemented by a section in smaller print labelled Complements and Exercises. Of exercises in our sense there are comparatively few, but the complements serve to open vistas to a multitude of more advanced questions. There is a wealth of historical material here and in the main text, over two hundred authors are quoted with dates though normally without textual references. The complement to the second chapter is particularly rich; it occupies a fourth of the book and the subject matter is kaleidoscopic. There is internal unity, however, and the brief sketches of the many topics are skilfully done. This section contains some interesting material on analytic functions of several variables and various extensions of Cauchy's theorem and Cauchy's integral to such functions. The Lebesgue integral is used in the complements. The discussion in the large in Chapter 3 takes the fixed point theorems of Brouwer and