

$$F(z, a) = \int_{x_0}^z f(x, a) dx$$

is a continuous function of z and a ," is added to the chapter on definite integrals.

Harnack's appendix on Fourier's series and Fourier's integral has been kept unchanged, but several pages of explanatory notes have been inserted in the form of an introduction to the appendix. The valuable notes and references to other works, given at the end of the volumes in the second edition, have been omitted in the third edition for the rather insufficient reason that they might discourage the student.

This calculus is a geometer's calculus. Over three hundred of the twelve hundred pages are devoted to applications to geometry. With the exception of the paragraphs on center of gravity, there are practically no references to mechanics or physics. All the problems given are worked out in detail. In fact, detail is one of the features of the work. The reviser rejoices in saying that as far as possible he has eliminated from the text such phrases as "the reader will easily see," "the proof is left to the student."

Profiting by the example of the second edition, this edition is quite free from typographical errors. The few found by the reviewer are unimportant. But there is one which may be misleading. The symbol Δ in the second volume is not from the same font of type as that in the first volume, and the difference in the two is sufficient to cause confusion to a beginner.

A detailed table of contents and a copious index make the work very valuable as a reference book, and Serret's Lehrbuch will no doubt continue to be one of the most used books on the shelves in the mathematical reading room at Göttingen.

A. R. CRATHORNE.

Vorlesungen über mathematische Statistik (Die Lehre von den statistischen Masszahlen). Von ERNST BLASCHKE, Professor an der Technischen Hochschule in Wien. Leipzig, Teubner, 1906. 263 pp.

THE present work has to do with the theory and application of statistical constants (statistische Masszahlen). It opens with views of different writers as to the field to be included under mathematical statistics. While it contains but little that is new in the line of theory, nearly every point is accompanied by an