The typographical errors are neither numerous nor important. The following are perhaps the most noticeable:

Page 57, line 24, should read $\lim f(x_n, y_n) = f(x_0, y_0)$ instead of $\lim f(x_n, y_n) = \lim f(x_0, y_0)$.

Page 85. $\sqrt[n]{u_n}$ instead of $\sqrt[u]{u_n}$.

Page 210, line 9. $\left|\int_a^b f(x)dx - s_a{}^b(z)\right| \leqq \epsilon$ instead of

$$\left|\int_a^b f(\alpha)dx - s_a{}^b(z)\right| \leqq \epsilon.$$

Page 213, last line. $\int_a^b f(x)dx$ instead of $\int_a f(x)dx$.

Page 352, line 22. $S' \leqq S$ instead of $S' < S$.

Page 352, line 28. Lim $S(\bar{\mathfrak{Z}})$ instead of lim $S(\mathfrak{Z})$.

The book is admirable for its clearness, conciseness and rigorous style throughout. It has not been the author's design to develop the theorems with a minimum of hypothesis but rather to present them in those forms most usually occurring. There are no problems, but much of the text has been illustrated with well-selected examples.

R. L. BORGER.

Les Fonctions Polyédriques et Modulaires. Par G. VIVANTI, Professeur à la Faculté des Sciences de Pavie. Ouvrage traduit par ARMAND CAHEN, Professeur au Lycée d'Evreux. Paris, Gauthier-Villars, 1910. vi+320 pp.

THE original Italian edition of this useful book appeared in 1906 and was reviewed in this BULLETIN, volume 14 (1908), page 144, by Professor J. I. Hutchinson. No important changes appear in the French translation. Although the work has the modest object of providing an easy introduction to the classic lectures of Klein on the icosahedron and to the treatise on elliptic modular functions by Klein and Fricke, this French translation is evidence of its great usefulness. Unfortunately the number of typographical errors is somewhat large, as was noted by Professor O. Perron in his review published in the *Archiv der Mathematik und Physik,* volume 18 (1911), page 259.

Since the scope and the contents of this work were so well presented in the review by Professor Hutchinson, to which we referred, we shall simply add that Vivanti did not follow Klein and Fricke in a slavish manner. On the contrary, the work before us gives a masterly independent presentation of some of the most fundamental parts of the theory of linear groups and their geometric interpretation. Many American readers will doubtless welcome this translation into a language with which they are more familiar than that with of the original work.

G. A. MILLER.

Wahrscheinlichkeitsrechnung. Von A. A. MARKOFF. Nach der zweiten Auflage des russischen Werkes übersetzt von H. LIEBMANN. Leipzig and Berlin, B. G. Teubner, 1912. viii+318 pp.

Le Calcul des Probabilités et ses Applications. Par E. CARVALLO. Paris, Gauthier-Villars, 1912. x+170 pp.

The Elements of Statistical Method. By WILFORD I. KING. New York, Macmillan, 1912. xvi+250 pp., price $1.50 net.

THE translation of Markoff's Wahrscheinlichkeitsrechnung will be a welcome companion to that of the same author's Differenzenrechnung. Its motive, as frankly stated in the preface, is to treat the theory simply as a deductive mathematical doctrine, aiming at precision in the analytic formulations, rigor in the proofs, and the determination of superior limits of error where approximate formulas are used. Axioms, definitions, and theorems are formulated explicitly as such, though not always with euclidean austerity of arrangement. The philosophy of the subject is disregarded, and the few special applications admitted receive a relative emphasis determined more by their availability as examples than by their intrinsic interest.

The first four chapters, half of the book, deal with discrete probabilities, elementary and cumulative, their representation by rational numbers, and the classical asymptotic expressions resulting from Stirling's formula. The examples here are entirely from games of chance. Especially noteworthy is the discussion of mathematical expectation.

The rest of the volume contains a short account of the occurrence of irrational numbers as limiting values, together with the notions of probability as applied to continuous sets, with a few of the standard geometric examples; a few pages