

The Profili now sell for three lira each in Italy,—about fifteen American cents, at the present rate of exchange. They are artistically printed and each is the work of a scholar. It seems strange that we have never, in this country, been able to support a series of this kind. The chief criticism of the work of this Italian press lies in the number of typographical errors that appear. On a single page (68), for example, we have the “Leiters of Sis Isaac Newton,” “R. Benthey” (for Bentley), “and other authentic documents,” “Eeral of Macclesfield, “Côtes” (for Cotes), and “Comptes-Rendus,” while on page 66 there are no less than nine errors of a similar nature.

DAVID EUGENE SMITH.

*Mathematiker Anekdoten.* Zweite, stark veränderte Auflage.  
Von W. AHRENS. Teubner, Leipzig and Berlin, 1920.  
42 pp.

WHETHER the telling of an anecdote shall provoke the interest of a pleased smile or the different amusement which leads to a shrug of the shoulders depends intimately and delicately upon the mental associations which arise involuntarily when a story is related; and the latter in turn depend upon the varied elements, and even the most minute, which make up the daily life and experience and environment. Hence it has always been, and perhaps always will be, difficult for one people to appreciate the humor of another. It is therefore natural that a book of anecdotes, containing humorous ones among others, shall be addressed by an author principally to his own countrymen.

These stories related by Ahrens of mathematicians and things mathematical are evidently intended primarily for his own countrymen; hence it is fitting that far the greater space should be given to men and things that are German. One of the pleasing features of the booklet is the inclusion of fifteen or more excellent likenesses of mathematicians. The stories range in excellence from some of high quality to some which are not pleasing. We do not find much of value in the story of the boys who convinced a simple old man that in their use of logarithm tables they were mastering the house numbers of Europe. We are only mildly interested when we are told of L. Fuchs' surprise when a long computation in his lecture led to the result  $0=0$ , that he first painfully suspected

an error, but that he then regained his composure and said " 'Null = Null' ist ja ein sehr schönes und richtiges Resultat." But the story of the youth of Gauss will please every one who enjoys the activity of genius. An effective impression of the progress of mathematical instruction is made by a brief account of mathematical instruction in the "good old times." The account of the self-taught Arago's successes when examined on one occasion by Louis Monge and on another by Legendre is inspiring; any one who does not know these stories will be repaid if he looks up the booklet for them alone.

R. D. CARMICHAEL.

*Leçons sur les Fonctions automorphes.* Par GEORGES GIRAUD. Gauthier-Villars, Paris, 1920. 126 pp. [Collection de Monographies de Emile Borel.]

IN a course of lectures at the College of France the author of this monograph has treated several aspects of the theory of automorphic functions. His central object was to present from a single point of view properties of several sorts of automorphic functions as investigated by many authors following the lead of Poincaré and Picard. The present volume contains an exposition of a part of these lectures.

The plan of treatment proposed places certain limitations upon the choice of material and its method of organization. No attempt is made to give a complete exposition of the theory of the fuchsian functions of Poincaré. Of the topics not treated the following may be mentioned: the theorems on the representation of the coordinates of algebraic curves; those on the integration of linear differential equations with algebraic coefficients and regular singular points; generalizations of these for functions of more than one variable; the theory of the so-called Kleinian functions of Poincaré. A treatment of certain of the omitted topics, it is said (page 4), will be given later in the form of a memoir or perhaps in the form of another volume similar to the present one.

The author's principal purpose of unification is realized through the use of a certain general class of groups ( $\Gamma$ ) satisfying certain hypotheses ( $H$ ) of a rather general character. In the first instance the groups are given, not explicitly but only implicitly through their possession of certain properties. The postulational basis of this treatment is laid at the beginning