

VOLUME II OF LORIA'S HISTORY

Storia delle Matematiche. By Gino Loria. Volume II. *I Secoli XVI e XVII.* Torino, 1931. 595 pp.

The second volume of Loria's History of Mathematics fulfills the expectations that the excellent first volume aroused.* We have here an account of the early development of modern mathematics, told in an interesting and often illuminating manner, and making full use of the extensive knowledge of the whole field for which Professor Loria is so well known. The book covers the two epoch-making centuries, the sixteenth and seventeenth, extensively and thoroughly. Even a beginner, reading through these stirring narrations, can not fail to be thrilled with the sense of the tingling vitality of those times, and the deep significance of their discoveries for all the long future; while the scholar will admire the aptness with which the work of a man or a period is characterized, and will appreciate, even where he does not always agree with, the originality and vivacity of the author's discussion.

A good idea of the plan and arrangement of the book can be obtained by noting the chapter groupings. They are as follows: Chapter 16, 64 pages on "syncopated algebra" † in Italy (dealing especially with Tartaglia, Cardan, Ferrari, and Bombelli); Chapter 17, 42 pages on syncopated algebra in Europe "Beyond the Alps," with Vieta as the most important name, but giving adequate attention also to Stifel, Recorde, Stevin, and others; Chapter 18, 27 pages on the influence of Humanism on mathematical studies; Chapter 19, 28 pages on trigonometry in the sixteenth century, including an interesting discussion of the quadrature of the circle; Chapter 20, 11 pages on scientific periodicals and societies founded during the seventeenth century; Chapter 21, 36 pages on the "first years of a glorious century," devoted particularly to Napier, Galileo, and Kepler; Chapter 22, 30 pages on the disciples of Galileo, especially Cavalieri and Torricelli; Chapter 23, 23 pages giving accounts of Girard, Harriot, Oughtred, and Hérigone; Chapter 24, 65 pages devoted to Descartes and Fermat; Chapter 25, 33 pages on the revival of pure geometry (the Italian word "Risveglio" in this connection cannot be adequately reproduced in English), the leaders in the movement being of course Desargues and Pascal; Chapter 26, 27 pages devoted to Roberval, Wallis, Barrow, and other immediate precursors of Newton and Leibniz in laying the foundations of the calculus; Chapter 27, called "Intermezzo," 41 pages on miscellaneous geometric discoveries, with Huygens as the most important figure; Chapter 28, 53 pages equally divided between Newton and Leibniz, discussing not only the calculus but also other phases of their mathematical work; Chapter 29, 33 pages on the disciples of Newton and Leibniz, the greatest names being Jacques and Jean

* The first volume was reviewed in this Bulletin, vol. 36 (1930), pp. 336-337.

† This term is explained in Cajori's *History of Mathematics*, New York, 1919, p. 111.