

when it is not. The author shows that every form of the second order gives an Eratosthenean series, and he gives in effect, by a laborious and not very convincing method of proof, the theorem that a quadratic congruence has, for a prime modulus, two roots or none. He does not seem to see the connection between the numbers represented by the form $ax^2 + bx + c$ and those represented by the binary quadratic form (a, b, c) .

The author is disappointing in his answer to the question "What confidence can be placed in the accuracy of these tables?" Where accuracy is of such vital importance the user of such a table is entitled to know of some of the checks and controls employed, and if comparison has been made with existing tables, what safeguards have been employed in making the comparison. Until some other independent computation has been made of the lists of primes here given, it will be well to use them with due caution.

D. N. LEHMER.

Meccanica Razionale. By C. Burali-Forti and I. Boggio. Turin and Genoa, S. Lattes and Co., 1921. xxiv + 425 pp.

Students of mathematics who are familiar with the chapter on the application of vector analysis to mechanics in Burali-Forti and Marcolongo's book on vector analysis will be particularly interested in the book under review, since it is much more easy to find topics in mechanics which can be conveniently treated by vector methods than it is to treat the whole subject by such methods. It is stated in the preface that the authors do not present a complete treatise on rational mechanics, but that they give certain general notions which form a necessary foundation for applied mechanics. The latter part of this statement is possibly misleading, as the authors do give a systematic introduction to mechanics, using vector methods, and cover ground not much different from what is ordinarily offered in courses on mechanics in our American universities. The principal differences are that the book under review devotes more attention to geometry of motion, contains no sets of exercises, and does not take up the dynamics of the top. The pages are small, about $4\frac{1}{2}$ " by $6\frac{1}{4}$ ", but to those who are familiar with the work of the authors, it is needless to state that they possess the ability to treat a subject adequately in a minimum amount of space.

The knowledge of vector analysis and of homographies assumed on the part of the reader is briefly outlined in a thirty-eight-page introduction. As most of our students study mechanics before they have taken a course in vector analysis, an instructor using this book as a text will find it necessary to spend some time clarifying the introduction. The book will be found very suggestive also in connection with a course on vector analysis.

PETER FIELD.