

increased in several other less important particulars; e. g., Delaunay's theorem concerning the meridians of surfaces of revolution of constant mean curvature has been added to the articles on the curvature of surfaces.

The second volume of the third edition has been increased and improved principally in the part devoted to differential equations. In particular, the section devoted to the calculus of variations has been entirely rewritten and brought into closer touch with recent work in this subject. Also a section (§ 7) has been added treating of curvilinear integrals and integrals of functions of a complex variable. The section adds but nineteen pages of new material and the treatment is limited to the outlines of the theory.

It is not too much to say, in conclusion, that the two volumes under review form an almost invaluable addition to the library of the teacher of the calculus whether from the point of view of clear and concise statement, or from that of content. It may not be out of place, in this connection, to call attention to the straightforward and rigorous treatment of the fundamental limit

$$\lim_{n \rightarrow \infty} (1 + 1/n)^n = e$$

in article 30 of the first volume, in comparison with the somewhat apologetic tendency exhibited in some of our modern texts on the calculus to avoid the use of this limit. One may doubt the expediency of presenting all the details of the proof employed by Professor Czuber in a first course in the calculus, but such a doubt scarcely necessitates the use of bizarre, or non-consistent methods.

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*Lezioni di Geometria proiettiva ed analitica.* Di EDGARDO CIANI, Professore nella R. Università e nella R. Scuola Navale Superiore di Genova. Pisa, Enrico Spoerri, 1912. v+525 pp.

THE plan of replacing the traditional introductory courses in cartesian geometry and in synthetic projective geometry by one set of lectures covering the elements of both subjects is not new to Italian universities. In 1888, through the initiative of Cremona, the faculty of mathematical and physical sciences of the University of Rome sanctioned such a