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## Lectures on the Theory of Elliptic Functions. By HARRIS HANCOCK, Ph.D. (Berlin), D. Sc. (Paris), Professor of Mathematics in the University of Cincinnati. Volume I, ANALYSIS. 8vo, xxiii+498 pages, 76 figures. Cloth \$5.00 net.

CONTENTS—Preliminary Notions. Functions which have Algebraic Addition-Theorems. The Existence of Periodic Functions in General. Doubly Periodic Functions. Their Existence. The Periods. Construction of Doubly Periodic Functions. The Riemann Surface. The Problem of Inversion. Elliptic Integrals in General. The Moduli of Periodicity for the Normal Forms of Legendre and of Weierstrass. The Jacobi Theta-Functions. The Functions sn u, cn u, dn u. Doubly Periodic Functions of the Second Sort. Elliptic Integrals of the Second Kind. Introduction to Weierstrass's Theory. The Weierstrassian Functions  $\mathcal{P}u, \zeta u, \sigma u$ . The Addition-Theorems. The Sigma-Functions. The Theta- and Sigma-Functions when Special Values are Given to the Argument. Elliptic Integrals of the Third Kind. Methods of Representing Analytically Doubly Periodic Functions of Any Order which have everywhere in the Finite Portion of the Plane the Character of the Integral or (Fractional) Rational Functions. The Determination of all Analytic Functions which have Algebraic Addition-Theorems. Table of Formulas.

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