

## CONTENTS

LIST OF TABLES . . . . .	xvi
INTRODUCTION: Prolegomena. (i) Lattices . . . . .	1
(ii) Elliptic functions in general . . . . .	16
(iii) The Weierstrassian functions . . . . .	26
I. The three primitive functions . . . . .	50
II. The set of elementary functions . . . . .	61
III. Properties of the elementary functions . . . . .	67
IV. Addition theorems for the elementary functions . . . . .	74
V. The nature of the problem of inversion . . . . .	86
VI. The aggregate of values of an elliptic integral . . . . .	102
VII. The ubiquity of the function inverse to an elliptic integral . . . . .	126
VIII. The solution of the problem of inversion . . . . .	140
IX. Functions and integrals with real critical values . . . . .	152
FIG. 30. . . . .	<i>Between pp. 158-9</i>
X. Introduction of the Jacobian functions . . . . .	170
XI. Properties of the Jacobian functions . . . . .	179
XII. Addition theorems for the Jacobian functions . . . . .	200
XIII. The Jacobi and Landen transformations . . . . .	208
XIV. Integration and the integrating functions . . . . .	230
XV. The dependence of the Jacobian functions and quarterperiods on the parameter . . . . .	245
XVI. Theta functions . . . . .	266
XVII. Real functions and real integrals . . . . .	288
XVIII. Integrals of the third kind . . . . .	316
EXERCISES . . . . .	330
NOTES ON THE EXERCISES . . . . .	337

The two-decimal and the three-decimal reference numbers form independent sequences inside each section, the former being used for the more important results; thus in Ch. XV, § 15·4, the formula ·430 is incidental to the proof of the theorem 15·47 and comes later than 15·46. The integral part, signifying the chapter, is not used except in a reference from one chapter to another, and for purposes of reference, sections, theorems, and formulae in the Introduction are given the integral part 0.