## TABLE OF CONTENTS

		<u>Page</u>
	INTRODUCTION	1
τ.	TOPICS IN COMPLEX ANALYSIS	3
	§1. General remarks	3
	§2. Entire and meromorphic functions	8
	§3. Rational functions	12
	§2. Entire and meromorphic functions §3. Rational functions §4. Periodic functions	15
ſŢ.	LATTICES AND THEIR FUNCTIONS	38
	1. Modules and point lattices	38
	§2. The automorphisms of a lattice	50
	§2a. A description of the group Γ	60
	\$3. Liouville's theorems	65
	$\S L$ . On the field of the elliptic functions	_
	with a given lattice.	76
III.	THE ELLIPTIC FUNCTIONS OF WEIERSTRASS	87
	11. The Eisenstein series	87
	\$2. The p-function and its derivatives	91
	§3. The principal functions of a lattice	
	and the differential equation of the	
	function.	103
	\$h. The \{\chi^{\text{function}}\) and the additive	
	decomposition of elliptic functions.	116
	15. The o-function and the multiplicative	
	decomposition of elliptic functions.	126
	§6. Addition theorems	142
	§7. A determinant	149
	§8. The co-functions of $\sigma(u)$ .	1 73
	§8a. On Jacobi's elliptic functions.	187
τv.	ELLIPTIC INTEGRALS	193
	§1. The function $\sqrt{a(z-z_1)(z-z_2)(z-z_3)(z-z_4)}$	
	and its Riemann surface.	193
	\$2. The Riemann surface of p (w).	206
	§3. The primitive functions of $f(w)$ .	217
	§4. Integration on R.	229
	\$5. On Euler's differential equation.	238
	§5a. Polars and polar forms.	242
	§5b. Once more, Euler's differential equation.	250

		. <u> </u>
v. sin	ILAR LATTICES	258
\$1. \$2. \$3. \$4.	Regular and symmetric lattices. On the symmetric lattices.	258 265 275
<b>§</b> 5	functions.	284 295

Para