

CONTENTS

CHAPTER I	<u>HOROCYCLIC GROUPS</u>		
§ 1.	The Poincaré model of the hyperbolic plane	...	1
§ 2.	Discontinuous groups of motions	...	7
§ 3.	Fundamental domain	...	12
§ 4.	Riemann surfaces	...	30
§ 5.	Meromorphic functions and differentials	...	38
CHAPTER II	<u>THE MODULAR GROUP AND ITS SUBGROUPS</u>		
§ 1.	The modular group	...	47
§ 2.	Subgroups of the modular group	...	57
§ 3.	Excursion into function theory	...	82
§ 4.	The elliptic modular functions	...	86
CHAPTER III	<u>MODULAR FORMS OF REAL DIMENSION</u>		
§ 1.	Modular forms and partial fraction series	...	109
§ 2.	Poincaré series and Eisenstein series	...	135
§ 3.	Metrisation and completeness theorem	...	144
§ 4.	The Fourier coefficients of integral modular forms.		156
CHAPTER IV	<u>NON-ANALYTIC MODULAR FORMS</u>		
§ 1.	The invariant differential equations	...	168
§ 2.	Non-analytic forms	...	181
§ 3.	Eisenstein series	...	194
CHAPTER V	<u>DIRICHLET SERIES AND EULER PRODUCTS</u>		
§ 1.	Gamma functions and Mellin transforms	...	216
§ 2.	Automorphic forms and Dirichlet series	...	223
§ 3.	The Hecke operators T_n	...	244