CONTENTS

I. GENERAL RESULTS 1
1. Uniform distribution (mod N) 1
2. The sets M(f) 4
3. Weak uniform distribution (mod N) 8
4. Uniform distribution of systems of sequences 9
Exercises 11

II. POLYNOMIAL SEQUENCES 12
1. Permutation polynomials 12
2. Generators for the group of permutation polynomials . . 14
3. Hermite's characterization of permutation polynomials . 15
4. Examples 18
5. Consequences of Fried's theorem 21
6. Weak uniform distribution (mod N) of polynomials 23
7. Notes and comments 25
Exercises 26

III. LINEAR RECURRENT SEQUENCES 28
1. Principal properties 28
2. Uniform distribution (mod p) of second-order linear recurrences 32
3. General modulus 38
4. Notes and comments 48
Exercises 50

IV. ADDITIVE FUNCTIONS 51
1. The criterion of Delange 51
2. Application of Delange's tauberian theorem 54
3. The sets M(f) for additive functions 58
4. Notes and comments 59
Exercises 60

V. MULTIPLICATIVE FUNCTIONS 62
1. Dirichlet-WUD 62
2. Decent functions 71
3. The number of divisors and Euler's φ-function 77
4. The vanishing of the sum (5.2) 79
5. The equality $\Lambda_m(N) = G(N)$ 85
6. Ramanujan's τ-function 88
7. Notes and comments 94
Exercises 95

VI. POLYNOMIAL-LIKE FUNCTIONS 96
1. Generating G(N) by the set of values of a polynomial . . . 96
2. An algorithm 102
3. Applications ot the study of $M^*(f)$ 104
4. The functions σ_k for $k \geq 3$ 107
5. Notes and comments 112
Exercises 113

REFERENCES 114

INDEX 122

ADDENDA 125