

## Contents

Preface	vii
Contents	viii
<b>1. Introductory expositions on projective representation of groups,</b>	<b>T. Hirai, A. Hora and E. Hirai</b>
0. Introduction	<b>1</b>
1. How projective representations appear naturally	2
2. Pauli's spin quantum number and Dirac's equation	9
3. Sources where projective representations occur (1)	18
4. Sources where projective representations occur (2)	23
5. Weil representations of symplectic groups	26
6. Hidden symmetries in the algebra $M(2^k, \mathbf{C})$	35
References	<b>45</b>
<b>2. Projective representations and spin characters of complex reflection groups <math>G(m, p, n)</math> and <math>G(m, p, \infty)</math>, I,</b>	<b>T. Hirai, E. Hirai and A. Hora</b>
0. Introduction	<b>49</b>
<b>Part I General theory for complex reflection groups</b>	<b>54</b>
1. Projective representations and representation groups	54
2. Wreath product groups and complex reflection groups	57
3. Representation groups of complex reflection groups	58
4. Normal subgroups of $R(G(m, 1, n))$ corresponding to $G(m, p, n)$	63
5. Infinite version $R(G(m, 1, \infty))$ and $R(G(m, p, \infty))$	65
6. General aspects about characters of groups	66
7. Conjugation in $R(G(m, p, n))$ modulo $Z$	71
8. Supports of spin characters of $G(m, 1, n)$ ( $m$ odd)	77
9. Supports of spin characters of $G(m, 1, n)$ ( $m$ even)	79
10. Supports of spin characters of infinite generalized symmetric groups $G(m, 1, \infty)$	82
11. Factorisability for spin characters of $G(m, 1, \infty)$	85
12. Finite-dimensional spin representations of $G(m, 1, \infty)$	86
13. Summary of results for $R(G(m, 1, \infty))$ , $m$ even	89
14. Limits of irreducible characters of an increasing sequence of groups	90