

Index

- ℓ -dimensional representation, **28**
- Young graph, *123*
- abelian, **17**
- adjoint representation, *61*
- alternating group, **24**
- associativity, **12**
- bijjective, **17**
- Bloch states, **10**
- Cartan subalgebra, *67, 85*
- center, **19**
- character, **39**
- chiral superfield, *198*
- Clebsch-Gordon coefficients, *74*
- closure, **12**
- color SU(3), *91*
- commutes, **8**
- compact, **51**
- conjugacy classes, **18**
- conjugate, **18**
- connected component, **50**
- continuous, **50**
- coset, *19*
- covariant derivative, *140*
- covering group, **60**
- crystallographic, **46**
- defining representation, *70, 92, 111*
- direct product, **21, 47**
- direct sum, **31**
- discrete, **50**
- equivalence classes, **18**
- equivalence relation, **18**
- equivalent representations, **28**
- faithful, **28**
- field strength tensor, *145*
- flavor SU(3), *91*
- fully reducible, **31**
- fundamental representations, *109*
- fundamental weights, *109*
- gauge condition, *148*
- generates, **17**
- global symmetry, *137*
- Goldstone boson, *169*
- great orthogonality theorem, **35**
- group, **12**
- group algebra, *121*
- Haar, *160*
- highest weight state, *68*
- homomorphism, **17**
- hooks, *126*
- Hurwitz, *160*
- ideal, *62*
- identity, **12**
- identity representation, **28**
- index, **20**

- invariant subalgebra, *62*
- invariant subspace, **29**
- irreducible representation, **29**
- isomorphic, **17**
- Jacobi identity, **57**
- kernel, **23**
- Killing form, *62*
- lattice vectors, **49**
- left coset, **19**
- Lie Algebra, **56**
- locally isomorphic, **60**
- Lorentz algebra, *64*
- Lorentz group, *63*
- Lorenz gauge, *148*
- Minkowski metric, *63*
- module, *9*
- normal subgroup, **20**
- order, **11, 20**
- parity invariant, **7**
- permissible placement, *131*
- permutations, **23**
- placquette, *143*
- Poincaré group, *63*
- point groups, **46**
- positive, *95*
- proper subspace, **29**
- pseudo-orthogonal, *63*
- quotient group, **20**
- rank, *85*
- rearrangement theorem, **16**
- reduced matrix element, *77*
- reducible representation, **29**
- reflexive, **18**
- regular representation, **37**
- relation, **18**
- representation, *9*
- roots, *86*
- semisimple, *62*
- simple, *62*
- simple root, *96*
- simply connected, **51**
- space, **46**
- spherical harmonics, *9*
- spontaneous symmetry breaking, *168*
- standard tableaux, *126*
- structure constants, **56**
- subgroup, **16**
- symmetric, **18**
- symmetric group, **23**
- temporal gauge, *152*
- tensor product, **47**
- topological groups, **50**
- transitive, **18**
- transpositions, **24**
- ultraviolet divergences, *140*
- unitary representation, **29**
- Vector coupling coefficients, *74*
- Vierergruppe, **25**
- weight vector, *85*
- weights, *85*
- Wigner-Eckhart theorem, *77*
- Young operator, *124*
- Young tableau, *124*