

Index

- $\mathbb{C}_p$, 82
- $\mathbb{Q}_p$, 28
- $\mathbb{Z}_p$, 24
- p -adic number, 24
- abelianization, 199
- absolute value, 29
- adèle, 277
- algebraic integer, 267
- Arason exact sequence, 232
- Artin symbol, 249, 259
- Artin–Schreier polynomial, 22
- bimodule, 90
- Bloch–Kato conjecture, 237
- Brauer equivalence, 108
- Brauer group, 87, 108
- central algebra, 107
- chain complex, 165
- coboundary, 129
- cochain complex, 170
- cocycle, 126
- cohomological equivalence, 246
- cohomologically trivial module, 244
- cohomology groups, 187, 194
- colimit, 141
- commutant, 112
- commutant theorem, 115
- completion (of a number field), 261
- corestriction, 221
- crossed product algebra, 134
- cup-product, 230
- cyclic extension, 5
- cyclotomic extensions of $\mathbb{Q}_p$, 46
- decomposition group, 265
- dimension shifting, 216
- direct limit, 141
- directed set, 59
- discrete G -module, 200
- discriminant (of a number field), 271
- divisible group, 185
- division algebra, 85
- exact sequence, 159
- Existence theorem, 254
- exponential (in a local number field), 75
- Ext groups, 173
- extension of a group by another, 124
- extensions of valuations, 35
- five-term exact sequence, 228
- Frobenius algebra, 186
- Frobenius element, 44
- Galois cohomology, 201
- Galois correspondence, 64
- Galois theory, fundamental theorem, 66
- global class field theory, fundamental theorem, 278
- group algebra, 88
- Hasse invariant, 149
- Hasse–Minkowski theorem, 24, 213
- Hensel’s lemma, 33
- higher ramification groups, 49
- Hilbert 90, 204
- Hilbert symbol, 211
- homogeneous cochains, 194
- homology groups, 187, 196
- homotopy equivalence, 168
- horseshoe lemma, 178
- idèle, 277
- indecomposable module, 105
- induced module, 214
- inertia degree, 40
- inertia subfield, 45
- inertia subgroup, 46, 266
- inhomogeneous cochains, 195

- injective module, 185
- inverse limit, 58
- Krasner's lemma, 81
- Kronecker–Weber theorem, 273
- Krull topology, 63
- Kummer extension, 8
- Kummer isomorphisms, 207
- Kummer pairing, 12
- Kummer theory, equivariant, 14
- Kummer theory, fundamental theorem, 14
- left module, 89
- Legendre symbol, 278
- local class field theory, fundamental theorem, 243
- local Kronecker–Weber theorem, 255
- local norm residue, 249
- logarithm (in a local number field), 75
- Merkurjev–Suslin theorem, 114
- Milnor conjecture, 237
- Minkowski's theorem, 272
- module, 89
- Nakayama's lemma, 42
- non-Archimedean, 29
- norm subgroup, 250
- normal basis theorem, 106
- normalized valuation, 31
- number field, 261
- Pontryagin dual, 10
- principal units, 51
- product topology, 57
- profinite completion, 71
- profinite group, 57
- projective module, 161
- projective resolution, 162
- quadratic reciprocity law, 279
- quaternion algebra, 86
- radical, 99
- ramification (of a prime in a number field), 265
- ramification index, 40
- reciprocity isomorphism, 244
- relative Brauer group, 115
- residue field, 32
- restriction (in cohomology), 218
- right module, 89
- ring of integers, 31, 39
- roots of unity, 4
- Rost–Voevodsky theorem, 238
- Schur's lemma, 95
- semisimple module, 94
- semisimple ring, 97
- Shapiro's Lemma, 215, 219
- simple module, 94
- simple ring, 100
- skewfield, 85
- snake lemma, 176
- splitting field, 118
- squares in $\mathbb{Q}_p$, 34
- standard resolution, 191
- tamely ramified extension, 53
- Tate cohomology, 190
- Tate duality, 252, 257
- topological group, 54
- Tor groups, 181
- totally ramified extension, 47
- universal norms, 253, 254
- unramified extension, 43
- valuation, 28
- weak equivalence, 167
- Wedderburn's theorem, 117, 136
- wreath product, 18
- zig-zag lemma, 176