

Index

- A*-rud 226
- absolute 27, 43
- absoluteness 26
- AC 5
- AC in L 76
- adequate ordinal 339
- admissible ordinal 95
- admissible set 48
- amenable set 45
- amenable structure 98
- antichain 110
- Aronszajn tree 111
- Aronszajn tree, κ - 137
- Aussonderungsaxiom 5
- Axiom of Constructibility 57, 71

- Basic Set Theory 36
- Basis Lemma 236
- below γ 203
- bijection 10
- bound variable 3
- branch 110
- BS 36
- BSL 176
- Build (x, f) 35

- canonical skolem function 90
- canonical extension 278
- cardinal 13
- cardinal product 15
- cardinal power 15
- cardinal successor 13
- cardinal sum 14
- Cardinal Transfer Property 333
- cardinality 13
- cartesian product 9, 15
- Cartesian Product Axiom 36
- categorical 385
- $cf(\alpha)$ 18
- CH 16
- Choice, Axiom of 5
- chromatic number 329
- classes 6

- closed set 20
- club 21
- coarse morass 381
- code 274
- cofinal E - M set 178
- cofinal function 18
- cofinality 18
- Collapsing Lemma 22
- Collection Axiom 5
- colouring 329
- commutativity 200
- Compactness Property 171
- complex 361
- Comprehension Axiom 4
- concatenation 32
- Condensation Lemma 80, 257, 278
- Condensation Principle for a machine 385
- Const (x) 32
- Const (x, u) 38
- constant symbol 32
- constructible set 58, 71
- constructible hierarchy 58
- constructible universe 57, 58
- Constructible Set Theory 56
- continuous function 21
- Continuum Hypothesis 16, 56
- contraction of quantifiers 30
- contraction of parameters 47
- countable chain condition 109
- Covering Lemma 196
- cumulative hierarchy 12

- D -absolute 26, 43
- Δ -system 360
- Δ_1 -comprehension principle 51
- Def (x) 57
- *-definable 383
- definition by cases 228
- dense subset 108
- densely ordered set 108
- diagonal intersection 124
- diamond 124

- diamond-plus 129
- diamond-star 128
- difference of two sets 7
- direct limit 200
- directed elementary system 200
- directed set 200
- $\text{dom}(R)$ 9
- domain of a relation 9
- downward absolute 26

- \in -induction 11
- \in -recursion 11
- E - M set 177
- Ehrenfeuch-Mostowski set 177
- element-type 333
- elementary embedding 48
- elementary substructure 48
- eligible structure 384
- embeddable tree 133
- empty set 5
- $\text{Enum}(a, x)$ 76
- Erdős cardinals 173
- Erdős-Rado Theorem 171
- Extended Basis Lemma 241
- extensional set 22
- Extension Property 171
- Extensionality, Axiom of 4, 36

- field of an order 173
- Fine Structure Theory 152
- Finite Rank Property 232
- Finiteness Principle for a machine 384
- $\text{Finseq}(x)$ 33
- $\text{Fml}(x)$ 37
- $\text{Fml}(x, u)$ 38
- $\text{Fml}^{\mathbb{E}_n}(x)$ 42
- Fodor's Theorem 123
- formula 3, 33
- Foundation Axiom 4
- $\text{Fr}(y, x)$ 38
- free variable 3
- function 9
- function over a set 47

- gap-1 morass 338
- Gap-1 Theorem 336
- Gap-2 Theorem 359
- gap- n morass 378
- Gap- n Property 333
- GCH 16
- GCH in L 84
- GCH in $L[A]$ 105
- Generalised Reflection Principle 25
- Generalised Continuum Hypothesis 16
- generated (of substructures) 177

- Gödel's pairing function 90
- good parameter 86, 259
- graph 329
- graph of a function 232

- height in a tree 109
- homogeneous set 170, 173
- homogeneous structure 334
- $ht(x)$ 109

- id 10
- identity function 10
- inaccessible cardinal 169
- indescribable 171
- indiscernible set 174
- induction 11
- Induction Schema 36
- ineffable cardinal 312
- infimum 108
- Infinity, Axiom of 4, 36
- injective function 9
- inner model 60
- intersection 7
- interval 108
- inverse function 10
- isomorphism 10

- J_α -skolem function 198
- Jensen Hierarchy 153, 251
- jumps below 392

- κ -Aronszajn tree 137
- κ -Compactness Property 171
- κ -Kurepa Family 149, 317
- κ -Kurepa Tree 137, 317
- κ -language 171
- κ -satisfiable 171
- κ -saturated structure 334
- κ -Souslin tree 137
- κ -tree 111
- (κ, λ) -Kurepa Hypothesis 320
- Keisler's Extension Property 171
- KH 118
- $\text{KH}(\kappa, \lambda)$ 320
- König Inequality 16
- KP 48
- Kripke-Platek Set Theory 48
- Kurepa Hypothesis 118
- Kurepa tree 118

- language of set theory 3
- length of a structure 173
- level in a tree 109
- Lévy hierarchy 27
- $\lim(x)$ 8
- limit cardinal 14
- limit ordinal 8

- limit point 20
- Localised Σ_1 -Collection Schema 52
- Löwenheim-Skolem Theorem 332
- LST 3
- \mathcal{M} -complex 361
- M -definable set 44
- M -language 44
- Mahlo cardinal 170
- maximal antichain 110
- measurable cardinal 174
- measure 175
- Minimal Model Property 77
- model, (Σ, α) - 177
- morass 338
- morass axioms 341
- n -ary function 9
- n -ary relation 9
- n -tuple 9
- natural numbers 8
- normal function 21
- normal tree 111
- null set 5
- Null Set Axiom 5
- $\text{On}(x)$ 7, 59
- On 8
- one-one function 9
- onto function 10
- open linearly ordered set 108
- order-type 8
- ordered continuum 108
- ordered pair 7
- ordinal 7
- ordinal number 7
- ordinal power 13
- ordinal product 13
- ordinal recursion 12
- ordinal sum 13
- $\text{otp}(x)$ 8
- p.r. function 100
- p.r. relation 101
- pair 7
- Pairing Axiom 7, 36
- pairing functions for a machine 386
- parameter 45
- parameter (for machines) 391
- partition 170
- partition tree 114
- $\text{PFml}(x)$ 33
- $\text{PFml}(x, u)$ 38
- $\text{Pow}(y, x)$ 67
- power set 7
- Power Set Axiom 4
- $\text{pr}(x)$ 75
- preimage 10
- primitive recursive function 100
- primitive recursive relation 101
- primitive formula 3, 33
- projectum 156, 266, 277
- proper classes 6
- \mathbb{Q} -embeddable tree 133
- Q -submodel 343
- quantifier contraction 30
- \mathbb{R} -embeddable tree 134
- Ramsey Cardinal 173
- Ramsey's Theorem 171
- $\text{ran}(R)$ 9
- range of a relation 9
- rank 12
- ranking of special structure 379
- realise a type 333
- recursion 11
- Recursion Theorem 54
- Reflection Principle 24, 26
- regressive function 123
- regular cardinal 18
- regular over 159
- relation 9
- relative consistency 77
- relative constructibility 102
- relativisation 24
- remarkable E - M set 179
- Replacement Axiom 5
- representation of a formula 236
- Representation Lemma 24
- rud in p 226
- $\text{rud}(X)$ 154
- rudimentary 154
- rudimentary class 226
- rudimentary closed class 233
- rudimentary closed structure 235
- rudimentary closure 154, 233
- rudimentary definition 226
- rudimentary function 225
- rudimentary in parameter p 226
- rudimentary relative to A 226
- (Σ, α) -model 177
- Σ_1 -Collection Principle 50
- Σ_1 -Collection Schema 48
- Σ_1 -Comprehension Schema 36
- Σ_n -code 274
- Σ_n -elementary substructure 48
- Σ_n -regular over 159
- Σ_n -singular over 159
- Σ_n -skolem function 86, 106
- $\text{Sat}(u, \varphi)$ 40
- $\text{Sat}^A(u, a, \varphi)$ 241
- satisfiable 171

- saturated structure 334
- SCH 220
- semi-singular at β 392
- sentence 3
- Seq(u, a, n) 36
- Seq(y, x) 65
- sequence 11
- set mapping 329
- sets 6
- SH 109
- sharp operation 182, 220
- Silver Machine 383
- simple function 230
- simplified morass 369
- singleton 7
- singular at β (for machines) 391
- singular cardinal 18
- Singular Cardinals Hypothesis 220
- singular over 159
- skolem function 86, 259
- skolem function, canonical 90
- *-skolem function 383
- Skolem Property for a machine 384
- slim tree 317
- Souslin Hypothesis 109
- Souslin Problem 108
- Souslin Property 109
- Souslin tree 112
- Souslin tree, κ - 137
- special Aronszajn tree 134, 167
- special structure 334, 379
- square 141, 158, 284
- standard code 156, 275
- standard parameter 156, 275
- stationary set 123
- strong embedding 298
- strongly inaccessible cardinal 169
- Sub(a, b, c, d) 39
- Subset Selection Schema 5
- succ(x) 8
- successor ordinal 8
- successor cardinal 13
- sup(A) 8
- supremum 8, 108
- surjection 10
- TC(x) 12
- TC-Recursion Theorem 55
- total function 9
- Trans(x) 7
- transitive 7
- transitive closure 12
- transitive collapse 22
- transitivisation 22, 24
- tree 109
- Tree Property 218
- tuple 8
- type of a two-cardinal structure 333
- U -absolute 27, 43
- U -saturated structure 379
- unbounded set 18
- uncountable 13
- uniform definability 45
- uniformisation 261
- Uniformisation Theorem 269
- uniformly Σ_n^M 45
- union 7
- Union Axiom 4, 36
- unique limits 111
- universal sentence 385
- universal theory 385
- universe of sets 6
- unordered pair 7
- upward absolute 27
- variable 3, 32
- Vbl(x) 32
- weak power 19
- weakly compact cardinal 170, 303
- weakly inaccessible cardinal 169
- well-founded class 11
- well-founded E-M set 181
- well-ordering of L 74
- WO(y, x) 74
- Zermelo-Fraenkel axioms 4
- zero sharp 182
- ZF 4
- ZFC 5

