

# INDEX

## Notation

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=\*\*\*  
≤#  
=#  
≡'  
≤\*\*  
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⊆'  
⊆\*

$\subseteq^{**}$   
 $\uparrow k(x)$   
 $\sigma_i, \tau_i$   
 $\varphi[i, r]$   
 $\#(t)$   
 $\beta(r)$   
 $\tau(g, r)$   
 $\Pi_1^0(L)$   
 $<_s^{**}$   
 $\#(t)$   
 $+^{**}$   
 $t[i, r]$   
 $\Gamma(T, x)$   
 $L^2$   
 $\leq 1$ CSUB  
 $[x]$   
 $f <_A$   
 $fA$   
 $R(f)$   
 $1$ -Con  
 $A$ -tree  
 $[A]^n$   
 $fE$   
 $R^+$   
 $R\#$   
 $R | <_x$   
 $R | \leq x$   
 $R(S, k, r)$   
 $T^{-1}$   
 $T_x$   
 $T | <_x$   
 $T | \leq x$   
 $X(t)$   
 $R(x_1, \dots, x_k)$   
 $y[1:n]$   
 $\lambda(k, n, m, R_1, \dots, R_{n-1})$   
 $\lambda'(k, n, R_1, \dots, R_{n-1})$   
 $\mu(p, q, \varphi)$

### Words, Phrases

$-\alpha-$

$\alpha^+$   
 $\alpha(E)$   
 $\alpha(r, E)$   
 $\alpha(r, E; p, q)$

$\alpha(E; p, < \infty)$   
 $\alpha$  (BRT fragment)  
 assertion  
 assignment  
 basic  
 correct  
 elementary inclusions  
 equation  
 equivalent  
 format  
     incorrect  
 formula  
 inclusions  
 inequations  
 pre elementary inclusions  
 standard  
     m functions and n sets  
     m functions and n sets/ $\subseteq$   
 statements  
 T correct  
 T incorrect  
 T reduction  
 T secure  
 tabular classification  
 tabular T classification  
 terms  
 valid  
 worklist

-A-

absoluteness theorem  
 $ACA_0$   
 $ACA'$   
 $ACA$   
 adequate  
 $AF(L)$   
 $AL(\alpha, \beta)$   
 $ALF(\alpha, \beta)$   
 annotated table  
 arithmetic  
 arithmetic progression conditions  
 asymptotic  
 assignment  
 atomic indiscernibility  
 $A(r, n, m, \varphi, a, b)$   
 $AS(L^*)$

AS (L\*\*)

ATR<sub>0</sub>

-B-

BAF

BFCN

binary relation

Boolean equation

Boolean inequation

bounded

bounded comprehension

bounded linear operators

bounding conditions

Borel functions

BRT

⊆ assertions

⊆ valid

assertion

core term

environment

    principal

equation

fixed point theorem

formula

fragment

    standard

    flat

inequation

mixed

signature

    standard

    flat

    entries

setting

term

topological

transfer

valid

variable

-C-

C

C'

cancellation law

Cantor space

CCOPSUB  
CFCN  
 $C^1$ FCN  
 $C^\infty$ FCN  
choice of norm  
closed unbounded  
CODE  
code over R  
collection  
complementation  
    upper  
Complementation Theorem  
    continuous  
    for well founded relations  
    for (V,K)  
    shift dominating  
    upper  
constructible hierarchy  
constructible universe  
Contraction Mapping Theorem  
critical  
CSAFCN  
cSUB  
CT(L\*\*)   
CT(L\*)

-D-

x-definable  
density conditions  
DEOPSUB  
differentiability  
digraph  
discretely ordered commutative semigroup  
dominator of digraph

-E-

E\*  
EBAF  
EBRT  
EFA  
E formula  
(ELG, INF)  
ELG[1]  
ELG[k]  
r-embedding

equivalent clauses  
Erdos-Rado tree  
ERT(f)  
ERT(f,  $\alpha$ )  
ETM(0, 1, +, -, •, ↑, log:p)  
ETM(0, 1, +, -, •, ↑, log)  
eventually strictly dominating  
EVSD  
EVSD[1]  
EVSD[k]  
Exotic Cases  
expansive  
expansive linear growth  
exp-log  
EXPN  
extended template  
extended terms  
extensional

-F-

FCN  
FCSUB  
finite homogenous sets  
finitely many exceptions  
FIN( $\alpha, \beta$ )  
first order  
fld  
FMOPESUB  
FODO(R)  
forcing  
formal Boolean equivalence  
Free Set Theorem

-G-

GCH  
geometric progression conditions  
GN  
good  
great

-I-

I  
I $\Sigma_0$ (exp)  
IBRT

INCODE  
indiscernibility  
indiscernibles  
INF  
INF(Z)  
INF( $\alpha, \beta$ )  
infinite Ramsey theorem  
inner trace  
internal  
invariant subspace problem

-J-

Jordan content

-K-

K( $\Pi$ )  
kernel of digraph  
kind

-L-

L  
L#  
L<sup>^</sup>  
L\*  
L\*\*  
L(x)  
L[x]  
L[ $\infty$ ]  
L( $\infty$ )  
L(E)  
L\*(E)  
L( $\in, =$ )  
large cardinal  
LB  
Lebesgue measure  
limit point  
Lipshitz conditions  
linearly bounded  
log  
lrk  
lth( $\lambda$ )  
lth(t)  
lth'( $\varphi$ )

-M-

$M^*$   
 $M^{**}$   
 $M\#$   
 $M^\wedge$   
 $M^+$   
 $M^*[r]$   
 $M^{**}\langle S \rangle$   
 $M^{**}[S, r]$   
MAH  
 $MAH^+$   
Mahlo  
    n-  
M-assignment  
maximally  $\alpha, T$  correct  
M, E definable  
 $M^*, E$  definable  
MF  
MF[1]  
MF[k]  
(MF, INF)  
M(I)  
min homogenous  
minimal code over R  
multivariate function  
    on N

-N-

N  
 $N^{**}\langle S \rangle$   
(N, +,  $\uparrow$ )  
(N, +, f), f the superexponential  
NAT  
next regressive  
nonasymptotic  
NON( $\alpha, \beta$ )  
NOPSUB  
nonstandard  
nowhere dense  
nst( $M^{**}$ )  
numerical label

-O-

obvious implications



n,k-ordering  
ot(k)  
o-minimal  
On  
outer trace

-P

P  
pair equivalent  
PA(L)  
PBRT  
piecewise  
 $\Pi_1^1$ -CA<sub>0</sub>  
pointwise continuity  
POW(E)  
power set  
precedence  
    table  
Presburger  
pre well ordering  
primitive recursive  
Principal Exotic Case

-Q-

**Q**

-R-

RAFCN  
RCA<sub>0</sub>  
real analytic  
real valued measurable cardinal  
recursive  
reduction  
    operations  
regressive  
regularity conditions  
relativization  
p,q,r-representation  
Res(n,m)  
restricted SOI  
reverse  
RNAT  
rng

-S-

SAFCN  
Sard's theorem  
Sat  $(M, \varphi, h)$   
Sat  $(M^*, \varphi)$   
SAT  $(R, n, x, m)$   
S-constants  
SD  
(SD, INF)  
SD(R)  
SD[1]  
SD[k]  
second incompleteness theorem  
second order  
Semenov conditions  
semialgebraic  
separation  
shape  
sharply extended  
shift dominating  
SMAH  
SMAH<sup>+</sup>  
SOI  
(N, +)  
square bracket partition relation  
special SOI  
specially related  
special  
S, r-embedding  
Skolem hull  
SMAH  
SMAH<sup>+</sup>  
p, q, b; r, n-special structure  
/prim  
p, q, b; r, n-special type  
/prim  
st  $(M^{**})$   
standard  
standard pairing function  
starred worklist  
strictly dominating  
on N  
strong SOI  
strongly inaccessible  
strongly Mahlo  
strongly n-Mahlo

p,q,b-structure  
p,q,b;r-structure

sup  
superexponential  
Szemerédi's theorem

-T-

table

AA  
AB  
reduced  
AA  
AB  
BA  
BB  
BC  
AC  
BA  
AC

tabular  $\alpha, T$  classification

TEMP 1

TEMP 2

template

term decomposition

n,k-terms

$(p, < \infty)$  term

p,q,r-term

terrific

Thin Set Property

Thin Set Theorem

TM(0,1,+,-,•,↑,log:p)

trace

TREE

tree methodology

TM(0,1,+,-,•,↑,log)

TM(L)

TR( $\Pi^0_1, L$ )

transfinite constants

r-type

p,q,b;r-type

/prim

-U-

U

ultimately periodic  
UNCLSUB  
UNOPSUB  
uniform continuity  
universal sentence preservation  
universal set  
upper density  
upper image  
upper logarithmic density

-V-

$\text{Val}(M, t, h)$   
 $\text{Val}(M^*, t)$   
 $\text{Val}(M^{**}, t)$   
 $\text{VCT}(L^{**} \setminus g)$   
 $V(L)$

-W-

W  
weakly inaccessible  
weakly compact cardinal  
well founded  
    binary relation  
witness  
 $\text{WKL}_0$   
worklist  
    label  
    root

-X-

-Y-

$Y_k$

-Z-

$\text{ZF} \setminus P$   
ZFC