Index

2, 60
2, 73

\( \Gamma_{(i_1, \ldots, i_k)} \), 171, 178, 183
\( \prod \) for Boolean algebras, 74
\( \rho_k \), 195
\( \sum \) for Boolean algebras, 74
\( \chi \), 80
\( \Omega_k \), 31
\( [\alpha]^{ Thy } \), 61
\( \emptyset \), 14
\( \equiv_{ Thy } \), 61
\( \square \), 59
\( \models \), 61
\( \models_a \), 217
\( \models_{ Thy } \), 61
\( \vdash \), 64

\( \mathfrak{A} \), 72
\( A_j \), 18
\( A^f_j \), 21
ancestor, 174, 175
arithmetic atoms, 216
arithmetic deduction function, 219
arithmetic edit, 209
arithmetic edit generation function, 212
arithmetic propositional atoms, 216
arithmetic truth function, 216
arithmetically implies, 216
arithmetically refutation complete, 219
arithmetically refutation sound, 219
arithmetically satisfiable, 216
arithmetically strongly complete, 219
arithmetically strongly sound, 219
ba, 95
BH, 76
BoolAtm, 77
Boolean algebra, 72

Boolean algebra of edits, 93
Boolean atom, 77
Boolean homomorphism, 75
Boolean isomorphism, 75
BoolHom, 75
BranchS, 174
BranchV, 42

C, 23, 211, 218
categorical edit, 19
characteristic homomorphism, 80
clause, 63
clause, positive, 63
Clauses, 63
correct record, for arithmetic edits, 209
correct record, for categorical edits, 19
correction: error correction problem, 19
covering set, 23, 139, 211, 218
covering set correctible, 26, 140, 212, 220
covering set method, 25
covering set of failed edits, 23
CV, 23, 140, 211, 219

D, 18
data domain, 18
data domain, for arithmetic edits, 209
data editing, 2
deduction function, 58, 64
directional resolution, 65
domain, 18
domain, for arithmetic edits, 209
dominate, 19
domination rules for FCF_\omega, 43

\( \mathfrak{C} \), 93
ec, 96
edit, 4
edit generation function, arithmetic, 212
edit generation function, categorical, 26
editing, 2
\( L \), 20, 139, 211, 218
empty clause, 63
end result of an FH-deduction, 111
end result of an \( R_{\text{Thy}} \)-deduction, 65
ENFH, 34
entering, 23
error correction guarantee, 27, 140, 212, 220
error correction problem, 19
error correction totality, 27, 140, 212, 219
error localisation problem, 6, 20, 139, 210, 218
essential, 23
essentially new edit, 34
essentially new FH edit generation function, 34
essentially new FH-generated edit, 33
explicit edits, 25
F, 40
\( F \), 107
\( f_{v} \), 97
failed edit, 23
failed record, for arithmetic edits, 209
failed record, for categorical edits, 19
fails, of a truth function, 60
Farkas' Lemma, 230
FCF, 40, 42
\( FCF_{w} \), 107, 202
FCF Algorithm, 40, 42
\( FCF \) Algorithm, 202
FCFS, 162, 171, 173
FCFS Algorithm, 171, 173
FH, 30
FH edit generation function, 30
FH-deduction, 111
FH-generated edit, 29
FHD, 108
FHD1, 109
FHG, 29
field, 18
field, for arithmetic edits, 209
field code forest, 40
Field Code Forest Algorithm, 40, 42
field domain, 18
field domain, for arithmetic edits, 209
final clause, 65, 111
FM, 213
\( FM \), 220
formulae, propositional, 58
Fourier-Motzkin elimination, 213
\( g_{v} \), 216
G1 to G7, 43
GenF, 41, 42
GenI, 41–43
GenI, properties, 43
GenS, 173, 174
GenS, properties, 174
GenV, 41, 42
GKL, 167
GS1 to GS7, 174
imputation, 6
incorrect record, for arithmetic edits, 209
incorrect record, for categorical edits, 19
inferior, 15
input set of clauses, 65, 111
involved, for arithmetic atoms, 218
involved, for arithmetic edits, 211
involved, for categorical edits, 23, 139
\( \ell \), 63
LE\text{Thy}, 62
\( LE_{\text{Thy}} \), 73
lifting property, 31
Lindenbaum algebra, 73
literal, 63
logically equivalent, 61
logically implies, 61
Max, 15
maximal essentially new FH edit generation function, 35
maximal FH edit generation function, 35
MENFH, 35
\( \mathcal{M}F \), 107
MFH, 35
MGKL, 167
Min, 15
model, 60
\( \mathcal{M}R_{Th} \), 115

\( n \), 18
\( N \), 21
NC, 103
nc, 99, 103
non-entering, 23
norm, 103
normal edit, 21
normal edit generation function, 26
normal form of an edit, 21
\( \mathcal{N}R_{Th} \), 115

ordered resolution, 65
ordered Thy-resolution, 65
output clause, 65, 111

\( p \), 14
\( p^j_v \), 89
\( \Psi_X \), 73
\( \Psi'_X \), 73

partial order, 14
PAtm, 89
PC, 103
positive clause, 63
predecessor, 175
Prop, 58
PropAtom, 58
PropForm, 58
propositional atom, 58
propositional formulae, 58
propositional satisfiability problem, 70
propositional theory, 59

pure deduction method to solve SAT, 71

\( q_e \), 216
QAtm, 216

record, 18
record, for arithmetic edits, 209
reduced arithmetic edit, 221
reduced clause, 143, 144
reduction of a normal clause by a record
and a set of fields, 144
reduction of a set of arithmetic atoms
by a record and a set of fields, 222
reduction of a set of arithmetic edits by
a record and a set of fields, 222
reduction of a set of normal clauses by
a record and a set of fields, 144
reduction of an arithmetic atom by a
record and a set of fields, 222
reduction of an arithmetic edit by a record
and a set of fields, 222
refutation complete, 68
refutation sound, 67
refutation Thy-complete, 68
refutation Thy-sound, 67
resolution deduction function, 64
resolvent, 64
resultant clause, 65, 111
\( \mathcal{R}_{Th} \), 64
\( \mathcal{R}_{Th}^{-}\text{-deduction} \), 65
\( \mathcal{R}_{Th}^{\prec} \), 65

SAT, 70
satisfiable, 60
satisfies, of a record, for arithmetic ed-
its, 209
satisfies, of a record, for categorical ed-
its, 19
satisfies, of a truth function, 60
\( SC \), 27
\( SCX \), 27
\( SE\mathcal{L} \), 20
semantics, 57
sequentially generated, 16
smallest weighted covering set, 27
smallest weighted covering set correctible,
smallest weighted error localisation problem, 20
sound, refutation, 67
sound, strongly, 67
starting set of clauses, 65, 111
strongly complete, 67
strongly sound, 67
strongly Thy-complete, 67
strongly Thy-sound, 67
subfunction, 15
subsume, 63
sufficient, 162
superfunction, 15
superior, 15
syntax, 57

T, 59
TF, 76
Th, 90
Th1, 90
Th2, 90
Tha, 217, 234
theory, propositional, 59
Thy, 60
Thy-equivalent, 61
Thy-logically equivalent, 61
Thy-logically implies, 61
Thy-resolution, 64, 65
Thy-satisfiable, 61
Thy-truth function, 60
Thy-valid, 61
ThyTF, 76
total order, 14
truth function, 60
⊤⊤, 102

uninvolved, for arithmetic edits, 211
uninvolved, for categorical edits, 23

valid, 61

X, 23, 140, 211, 219

yields a correction, 20, 139, 210, 218