# Contents

## VOLUME I


Editorial note . . . . . VII
A. Mostowski (1913–1975) (*by W. Marek*) . . . . . IX
Bibliography of works of A. Mostowski (*compiled by W. Marek*) . . . . . XI
Andrzej Mostowski's studies of decidability, recursion and hierarchy (*by A. Grzegorczyk*) . . . . . XXI
The investigations of Andrzej Mostowski in the foundations of set theory (*by W. Guzicki and W. Marek*) . . . . . XXVII
The work of Andrzej Mostowski in model theory (*by L. Pacholski*) . . . XXXIII
Research work of A. Mostowski in logical calculi (*by C. Rauszer*) . . . . . XLI
Contribution of Mostowski to foundation of second order arithmetic (*by P. Zbierski*) . . . . . XLV
Thirty years of foundational studies . . . . . 1
Models of set theory . . . . . 177
On the independence of the well-ordering theorem from the ordering principle 290
On definable sets of positive integers . . . . . 339
(with A. Grzegorczyk and Cz. Ryll-Nardzewski) The classical and the $\omega$-complete arithmetic . . . . . 371
Formal system of analysis based on an infinitistic rule of proof . . . . . 390
An exposition of forcing . . . . . 416
Some impredicative definitions in the axiomatic set-theory . . . . . 479
(with A. Ehrenfeucht) Models of axiomatic theories admitting automorphisms 494
(with Y. Suzuki) On $\omega$-models which are not $\beta$-models . . . . . 513
Observations concerning elementary extensions of $\omega$-models I . . . . . 524
An undecidable arithmetical statement . . . . . 531
(with W. Marek) On extendability of models of ZF set theory to the models of Kelley–Morse theory of classes . . . . . 553


## VOLUME II


Editorial note . . . . . VII
Countable Boolean fields and their application to general metamathematics . . . 1
On the independence of definitions of finiteness in a system of logic . . . . 18
On some universal relations . . . . . 68
(with A. Lindenbaum) On the independence of the axiom of choice and some of its consequences . . . . . 70
(with A. Tarski) Boolean rings with an ordered basis . . . . . 75
Axiom of choice for finite sets . . . . . 92
On absolute properties of relations . . . . . 124
On the principle of dependent choices . . . . . 134

Proofs of non-deducibility in intuitionistic functional calculus . . . . . 138
On a set of integers not definable by means of one-quantifier predicates . . . . . 142
(with A. Tarski) Arithmetical classes and types of well ordered systems . . . 148
On the rules of proof in the pure functional calculus of the first order . . . 149
A classification of logical systems . . . . . 154
On models of axiomatic systems . . . . . 192
On direct products of theories . . . . . 218
On a system of axioms which has no recursively enumerable arithmetic model 249
A lemma concerning recursive functions and its applications . . . . . 255
A formula with no recursively enumerable model . . . . . 259
Examples of sets definable by means of two and three quantifiers . . . . . 275
Contributions to the theory of definable sets and functions . . . . . 287
(with J. Łoś and H. Rasiowa) A proof of Herbrand's theorem . . . . . 292
A generalization of a theorem of M. Deuring . . . . . 298
Concerning a problem of H. Scholz . . . . . 306
On a generalization of quantifiers . . . . . 311
On computable sequences . . . . . 336
On recursive models of formalized arithmetic . . . . . 351
On a problem of W. Kinna and K. Wagner . . . . . 357
On various degrees of constructivism . . . . . 359
A generalization of the incompleteness theorem . . . . . 376
An example of a non-axiomatizable many valued logic . . . . . 404
Concerning the problem of axiomatizability of the field of real numbers in the weak second order logic . . . . . 409
(with A. Grzegorczyk and Cz. Ryll-Nardzewski) Definability of sets in models of axiomatic theories . . . . . 427
(with A. Ehrenfeucht) A compact space of models of first order theories . . . . 432
(with J. Łoś and H. Rasiowa) An addition to the paper "A proof of Herbrand's theorem" . . . . . 437
Axiomatizability of some many valued predicate calculi . . . . . 442
Representability of sets in formal systems . . . . . 468
A problem in the theory of models . . . . . 488
The Hilbert epsilon function in many-valued logics . . . . . 494
On models of Zermelo–Fraenkel set theory satisfying the axiom of constructibility 514
Craig's interpolation theorem in some extended systems of logic . . . . . 524
Models of second order arithmetic with definable Skolem functions . . . . . 541
A transfinite sequence of $\omega$-models . . . . . 554
Partial orderings of the family of $\omega$-models . . . . . 561
A contribution to teratology . . . . . 577
A remark on models of the Gödel–Bernays axioms for set theory . . . . . 590