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# Perspectives in Mathematical Logic

$\Omega$ -Group: R. O. Gandy, H. Hermes, A. Levy,  
G.H. Müller, G.E. Sacks, D.S. Scott

J. Barwise

## Admissible Sets and Structures

An Approach to Definability Theory

1975. 22 figures, 5 tables. XIV, 394 pages  
ISBN 3-540-07451-1

*From the reviews:*

"... This book is beautifully and clearly written, and is a pleasure to read. Any student of admissible sets and definability theory, indeed any logician, should have a copy within easy reach; he will not only get the facts, but gain from the insight of the author in the field he has done so much to create and bring to this degree of maturity..."

*Mathematical Reviews*

J.E. Fenstad

## General Recursion Theory

An Axiomatic Approach

1980. XI, 225 pages. ISBN 3-540-09349-4

**Contents: Pons Asinorum:** On the Choice of Correct Notions for the General Theory. - **General Theory: Combinatorial Part. General Theory: Subcomputations.** - Finite Theories on One Type. Finite Theories on Two Types. - **Infinite Theories:** Admissible Prewellorderings. Degree Structure. - **Higher Types:** Computations Over Two Types. Set Recursion and Higher Types. - References. - Notation. - Index.

P.G.Hinman

## Recursion-Theoretic Hierarchies

1978. XII, 480 pages. ISBN 3-540-07904-1

**Contents: Basic notions of definability:** Groundwork. Ordinary recursion theory. Hierarchies and definability. - **The analytical and projective hierarchies:** The first level.  $\Delta_1^1$  and beyond. - Generalized recursion theories: Recursion in a type-2 functional. Recursion in a type-3 functional. Recursion on ordinals. - Epilogue.

A. Levy

## Basic Set Theory

1979. 20 figures, 1 table. XIV, 391 pages.  
ISBN 3-540-08417-7

**Contents: Pure Set Theory:** The Basic Notions. Order and Well-Foundedness. Cardinal Numbers. The Ordinals. The Axiom of Choice and Some of Its Consequences. - **Applications and Advanced Topics:** A Review of Point Set Topology. The Real Spaces. Boolean Algebras. Infinite Combinatorics and Large Cardinals. - Appendix. - Bibliography. - Index of Notation. - Index.

M. Lerman

## Degrees of Unsolvability

Local and Global Theory

1983. 56 figures. XIII, 307 pages  
ISBN 3-540-12155-2

**Contents:** Introduction. - The Structure of the Degrees: Recursive Functions. Embeddings and Extensions of Embeddings in the Degrees. The Jump Operator. High/Low Hierarchies. - Countable Ideals of Degrees: Minimal Degrees. Finite Distributive Lattices. Finite Lattices. Countable Us's. - Initial Segments of  $D$  and the Jump Operator: Minimal Degrees and High/Low Hierarchies. Jumps of Minimal Degrees. Bounding Minimal Degrees with Recursively Enumerable Degrees. Initial Segments of  $\mathcal{D}[0, 0']$ . - Appendix A: Coding into Structures and Theories. - Appendix B: Lattice Tables and Representation Theorems. - References. - Notation Index. - Subject Index.



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