

Joseph R. Shoenfield

Recursion Theory

Springer-Verlag

Berlin Heidelberg New York

London Paris Tokyo

Hong Kong Barcelona

Budapest

CONTENTS

1. Computability	1
2. Functions and Relations	2
3. The Basic Machine	3
4. Macros	5
5. Closure Properties	8
6. Definitions of Recursive Functions	11
7. Codes	16
8. Indices	20
9. Church's Thesis	26
10. Word Problems	28
11. Undecidable Theories	32
12. Relative Recursion	39
13. The Arithmetical Hierarchy	43
14. Recursively Enumerable Relations	48
15. Degrees	53
16. Evaluation of Degrees	59
17. Large RE Sets	63
18. Functions of Reals	67
19. The Analytical Hierarchy	71
20. The Projective Hierarchy	74
Suggestions for Further Reading	79
Index	81