

# Contents

	<b>Page</b>
Introduction	1
1. Lambda-conversion	3
2. Combinators	14
3. Representing the recursive functions	26
4. The undecidability theorem	35
5. Extensional equality	40
6. The equivalence of $\lambda$ -conversion and the theory of combinators	47
7. Strong reduction	52
8. Combinators with types: first approach	66
9. Combinators with types: second approach	75
10. Logic based on combinators	101
11. Gödel's functions of finite type	127
Appendix 1: proof of the Church-Rosser theorem	139
Appendix 2: proof of Theorem 11.17	151
Bibliography	157
Index	163