

Contents

	STUDENT'S PREFACE	ix
	TEACHER'S PREFACE	x
	Acknowledgments, xi	
1	LOGIC	1
	1.1 Introduction, 1	
	1.2 Key Terms, 3	
	Exercises, 7	
2	IF	9
	2.1 Compound Statements, 9	
	2.2 Symbolizing Conditionals, 10	
	2.3 Arrow Out, 14	
	Exercises, 20	
3	AND	24
	3.1 Symbolizing Conjunctions, 24	
	3.2 Ampersand In, 27	
	3.3 Ampersand Out, 28	
	Exercises, 32	

vi	CONTENTS	
4	IF (AGAIN)	39
	4.1 Symbolizing Puzzling Conditionals,	39
	4.2 Arrow In,	42
	<i>Exercises,</i>	51
5	NOT	59
	5.1 Symbolizing Negations,	59
	5.2 Dash In,	62
	5.3 Dash Out,	67
	<i>Exercises,</i>	71
6	IFF	81
	6.1 Symbolizing Biconditionals,	81
	6.2 Double Arrow In and Out,	82
	<i>Exercises,</i>	86
7	OR	92
	7.1 Symbolizing Disjunctions,	92
	7.2 Wedge In,	94
	7.3 Wedge Out,	97
	<i>Exercises,</i>	101
8	RÉSUMÉ	111
	8.1 Summary,	111
	8.2 Proof Strategy,	114
	8.3 Definitions,	118
	<i>Exercises,</i>	122
9	DERIVED RULES	129
	9.1 Derived Rules 1,	129
	<i>Exercises,</i>	133
	9.2 Derived Rules 2,	136
	<i>Exercises,</i>	143
10	TRUTH TABLES	150
	10.1 Full Truth Tables,	150
	<i>Exercises,</i>	158
	10.2 Brief Truth Tables,	162
	<i>Exercises,</i>	167

11	TRUTH TREES	172
	11.1 Constructing Trees,	172
	11.2 Testing Arguments,	176
	<i>Exercises,</i>	181
12	STATEMENTS	185
	12.1 Logical Truths,	185
	12.2 Contradictions,	188
	12.3 Contingent Statements,	190
	<i>Exercises,</i>	192
13	LOGICAL RELATIONS	194
	13.1 Entailment,	194
	13.2 Logical Equivalence,	196
	<i>Exercises,</i>	198
14	NATURAL ARGUMENTS	203
	14.1 Argument Identification,	203
	14.2 Formalization,	206
	14.3 Evaluation,	208
	<i>Exercises,</i>	209
APPENDIX 1	METATHEORY: SOUNDNESS AND COMPLETENESS OF THE SYSTEM <i>PL</i>	216
APPENDIX 2	IS PROPOSITIONAL LOGIC RELIABLE?	229
APPENDIX 3	ALTERNATIVE SYMBOLS	232
APPENDIX 4	ONE-SIDED TRUTH TREES	233
APPENDIX 5	USING <i>PROPLOGIC</i>	235
APPENDIX 6	SOLUTIONS TO STARRED EXERCISES	247
	INDEX	265
	PROOF RULES	272
	TRUTH-TREE RULES	273
	LICENSE AGREEMENT	275