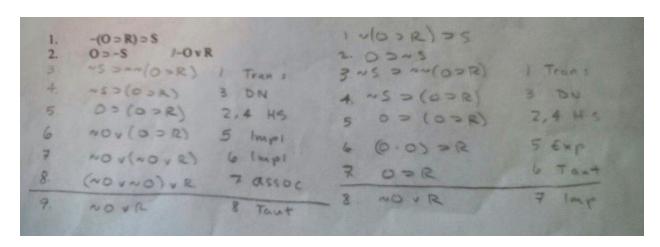
Practice Final Answer Key

18 Rules:

Use the 18 rules of inference to derive the conclusion of the following arguments. Do **not** use either conditional proof or indirect proof.

- c. (10 pts)
- 1. ~(O⊃R)⊃S
- 2. 0 ⊃ ~S



- d. (20 pts)
- 1. ~I⊃(K⊃~R)
- 2. $I \supset (K \supset A)$
- 3. A ⊃ M
- 4. K•~M

/~(R v I)

(2) 1. 2.	$\sim I \supset (K \supset \sim R)$ $I \supset (K \supset A)$	100		Alia	yerrion on back =>
3.	$A \supset M$	1 m n			
4.	K · ~M	/~(R v I)	1		
5,	(I.K) > A	2, Exp	_>		
6.	(NI.K) 2 NR		(
7.	~M·K	4. COMM 7, Simp	(Ne	ater version)	
8.	~M				7.
9.	~A	3,8, MT	9,	K - ~ M	7, comm
10,	~(I·K)	5,9, MT	10.	K	9, Simp
11.	NIVNK	10, DM	11,	~A	3,8, MT
12,	~k v ~I	11, COMM	12,	~(I.K)	5,11 M7
13.	K . ~ M	7, COMM	13.	~J v ~ K	12, DM
14,	K	13, SIMP	14.	nkvnI	13, COMM
15,	NNK	14, DN		NNK	10, DN
16.	nI In	12,15, DS	16,	~I	14, 15,05
17.	KONR	1,16 MP	17,	KONR	1,16,MP
13	NR	14,17 MP		~R	10,17, MP
19.	NR.NI	16,18, Conj2	19.	~R·~I	16,17, conj
20.	N(RVI)	19, DM	20.	~(RVI)	17 DM

Conditional Proof:

Use the 18 rules of inference and the conditional proof method to derive the conclusion of the following arguments. Do **not** use indirect proof.

e. (10 pts)

1.
$$P \supset (I \supset W)$$

1. P > (I > W)
2. I > (W > ~S)
3. P

ACP
4. I > W

ACP
4. I > W

ACP
4. I > W

ACP
6. W > ~S NP

8. W 4/S MP
8. L > G, 7 MP
9. I > ~S S-8 CP

10. P > (I > W)

1. P > (I > W)

1. P > (I > W)

2. I > (W > ~S)

3. P

ACP
4. I > W

ACP
1 > W

ACP

f. (25 pts)

- 1. $(G \cdot \sim P) \supset K$
- 2. E⊃Z
- 3. P ⊃ ~Z
- 4. G⊃(LvE)

v 🗀)	7 (0	L) > K	
1. 2. 3. 4. 5, 6. 7. 8. 9. 10, 11, 12,	(G·~P) > K E > Z P > ~Z G > (L v E) A L G A L V E E Z A P	((GL) = K ACP 5, SIMP 5, COMM 7, SIMP 4,6, MP 8,9, DS 2,10 MP 11, DN 3,10 MT	
14,	(G. NL) OK		

Indirect Proof:

Use the 18 rules of inference and the indirect proof method to derive the conclusion of the following arguments. Do **not** use conditional proof.

- g. (25 pts)
- 1. $C \supset (D \supset H)$
- 2. D•~H
- 3. H v T
- / ~C T

1. 2. 3. 45. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15 16. 17	C=(D=H) D·-H HVT ~(~C.T) ~H · D ~H · D ~H · D ~H · C · D) ~C · ~D ~C · ~D ~C · ~C ~C · T ~C · T	1-C.T AIP 2, Simp 2, COMM 6, Simp 1, Exp 7,8 MT 9, DM 10, COMM 5, DN 11,12, DS 3,7, DS 13,14, Conj- (~C.T) 4,15 Conj- 4-16 IP	4 N(NC.T) 5 NNCVNT 6 NH D 7. NT VNNC 10. NNT 11. NNC 12. C 13. D>H 14. D 15 H. 16 H.NH	A1P 4 DM 6 Simp 2 comm 4 Simp 317 DS 5 Comm 8 DN 9,10,05 11 DN 112 MP 2 Simp 13 1 M MP 7, 14 Conj.
18	WC.T	(7, DN	17NC.T	4-16 1 1P