

Intro Logic, Homework #3

1. $Q (\sim R \supset S); R \supset P; \sim P \& T / \text{SHOW } Q \& T$
2. $\sim P \& [Q (\supset R \supset S)]; \sim S / \text{SHOW } (P \supset Q) \supset R$
3. $(P \supset S) \supset T; (Q \supset U) \supset V; (T \& V) \supset R / \text{SHOW } P \supset (Q \supset R)$
4. $\sim R \supset (P \supset Q); \sim P; Q \supset R / \text{SHOW } R$
5. $Q (\supset \sim P \supset R); R \supset \sim P / \text{SHOW } (\sim P \supset Q) \supset \sim P$
6. $P \supset (Q \supset S); P \supset (R \supset T); \sim S \supset \sim T / \text{SHOW } P \supset (Q \supset R)$
7. $P \& (Q \supset R) / \text{SHOW } (P \& Q) \supset (P \& R)$
8. $(\sim P \supset Q) \supset (P \supset R); \sim Q; R \supset \sim (S \supset P) / \text{SHOW } \sim P$
9. $\text{SHOW } (P \supset Q) \supset (Q \supset P)$
10. $(P \& Q) \supset (P \& R); (Q \supset R) \supset S / \text{SHOW } P \& S$