

## Proofs I

Construct proofs for each of the following arguments without using conditional proof or indirect proof. Convention: "///" separates the premises from the conclusion. You may do these with paper and pencil, or you may download and use the [general purpose proof form](#).

1.  $\sim K, C \supset (A \& B), K \vee C, \text{/// } A \& B$
2.  $A \supset B, B \supset A, B, \text{/// } A \& B$
3.  $R \& (A \supset C), C \supset B, \text{/// } A \supset B$
4.  $A \supset (C \vee D), \sim(C \vee D), \text{/// } B \vee \sim A$
5.  $H \supset (K \supset L), N \supset M, N, \text{/// } (K \supset L) \vee M$
6.  $(H \supset B) \& (J \supset A), R \& (H \vee J), \text{/// } B \vee A$
7.  $A \vee \sim B, \sim A, \text{/// } \sim A \& \sim B$
8.  $K \supset L, L \supset M, (K \supset M) \supset M, \text{/// } M$
9.  $A \supset B, A \vee \sim Z, \sim B \text{/// } \sim Z$
10.  $L \supset (M \supset P), (P \supset R) \vee \sim(M \supset P), R \& \sim(P \supset R) \text{/// } \sim L \vee (M \supset P)$
11.  $C \vee \sim E, \sim E \supset (B \& \sim C), T \supset \sim C, C \supset E, \sim C \text{/// } B$
12.  $L \supset (M \supset R), (\sim L \supset S), (\sim S \& M), (Q \supset T) \text{/// } (R \vee T)$
13.  $(R \supset P) \vee \sim S, (R \supset P) \supset (A \& \sim B), \sim S \supset P, \sim P \text{/// } \sim B$
14.  $(A \& B), L \supset (B \supset U), (A \vee R) \supset L \text{/// } U$
15.  $(\sim A \& B) \supset C, \sim P \supset B, \sim S, (\sim P \& \sim A) \vee S \text{/// } C \vee (A \vee B)$
16.  $(P \vee \sim Q) \vee \sim R, (S \vee T) \supset \sim R, \sim P \& S \text{/// } \sim Q$
17.  $R \supset (\sim B \supset \sim C), ((L \vee \sim Q) \& R), (L \supset \sim R), (\sim Q \supset Z) \text{/// } (\sim C \vee Z)$

[table of contents](#)

[List of Exercises](#)