

2)

Statement:  $(A \vee B) \vee C$

	A	B	C	$(A \vee B) \vee C$
0)	T	T	T	T
1)	T	T	F	T
2)	T	F	T	T
3)	T	F	F	T
4)	F	T	T	T
5)	F	T	F	T
6)	F	F	T	T
7)	F	F	F	F

Truth Table Constructor

File View Options Help

Statement:  $A \rightarrow A$

	A	$A \rightarrow A$
0)	T	T
1)	F	T

Statement:  $(A \rightarrow B) \rightarrow (B \rightarrow A)$

	A	B	$(A \rightarrow B) \rightarrow (B \rightarrow A)$
0)	T	T	T
1)	T	F	F
2)	F	T	T
3)	F	F	T

Statement:  $A \vee \sim A$

	A	$A \vee \sim A$
0)	T	T
1)	F	T

3)

Statement:  $(A \rightarrow B) \vee (B \rightarrow A)$

	A	B	$(A \rightarrow B) \vee (B \rightarrow A)$		
0)	T	T	T	T	T
1)	T	F	F	T	T
2)	F	T	T	T	F
3)	F	F	T	T	T

Statement:  $A \wedge B$

	A	B	$A \wedge B$
0)	T	T	T
1)	T	F	F
2)	F	T	F
3)	F	F	F

Statement:  $A \vee A$

	A	$A \vee A$
0)	T	T
1)	F	F

Statement:  $A \wedge B$

	A	B	$A \wedge B$
0)	T	T	T
1)	T	F	F
2)	F	T	F
3)	F	F	F

Statement:  $(A \wedge B) \rightarrow A$

	A	B	$(A \wedge B) \rightarrow A$	
0)	T	T	T	T
1)	T	F	F	T
2)	F	T	F	T
3)	F	F	F	T

14)

Proof #1

File Edit Backward Forward Window Help

1:	A	assumption
2:	B	assumption
3:	C	assumption
4:	D	assumption
5:	A	hyp 1
6:	$D \rightarrow A$	$\rightarrow$ intro 4-5
7:	$C \rightarrow (D \rightarrow A)$	$\rightarrow$ intro 3-6
8:	$B \rightarrow (C \rightarrow (D \rightarrow A))$	$\rightarrow$ intro 2-7
9:	$A \rightarrow (B \rightarrow (C \rightarrow (D \rightarrow A)))$	$\rightarrow$ intro 1-8

15)

The screenshot shows a window titled "Proof #1" with a menu bar containing "File", "Edit", "Backward", "Forward", "Window", and "Help". The proof content is as follows:

1:	$A$	assumption
2:	$A \rightarrow \perp$	assumption
3:	$\perp$	$\rightarrow$ elim 2,1
4:	$(A \rightarrow \perp) \rightarrow \perp$	$\rightarrow$ intro 2-3
5:	$A \rightarrow ((A \rightarrow \perp) \rightarrow \perp)$	$\rightarrow$ intro 1-4

The proof steps are visually structured with nested boxes: a large box encloses steps 1 through 4, and a smaller box inside it encloses steps 2 and 3.