

1:	$P \rightarrow Q, Q \rightarrow R, P$	premises
2:	P	hyp 1.3
3:	$P \rightarrow Q$	hyp 1.1
4:	Q	\rightarrow -E 2,3
5:	Q	assumption
6:	Q	hyp 5
7:	$Q \rightarrow R$	hyp 1.2
8:	R	\rightarrow -E 6,7
9:	R	assumption
10:	R	hyp 9
11:	R	cut 8,9-10
12:	R	cut 4,5-11