



TUTORIAL 2

1. Show that $R \wedge (P \vee Q)$ is a valid conclusion from the premises $P \vee Q$, $Q \rightarrow R$, $P \rightarrow M$, $\neg M$.
2. Prove that the premises $a \rightarrow (b \rightarrow c)$, $d \rightarrow (b \wedge \neg c)$ and $(a \wedge d)$ are inconsistent.
3. Show that $R \rightarrow S$ can be derived from the premises $P \rightarrow (Q \rightarrow S)$, $\neg R \vee P$ & Q
4. Using conditional proof prove that $\neg P \vee Q$, $\neg Q \vee R$, $R \rightarrow S \Rightarrow P \rightarrow S$
5. Show that the following implication by using indirect method. $(R \rightarrow \neg Q)$, $R \vee S$, $S \rightarrow \neg Q$, $P \rightarrow Q \Rightarrow \neg P$.
6. Using Indirect method of proof, derive $p \rightarrow \neg s$ from the premises $p \rightarrow (q \vee r)$, $q \rightarrow \neg p$, $s \rightarrow \neg r$ and p .