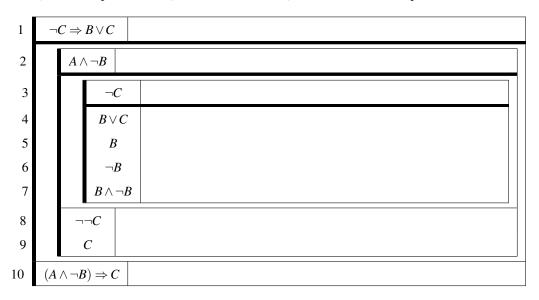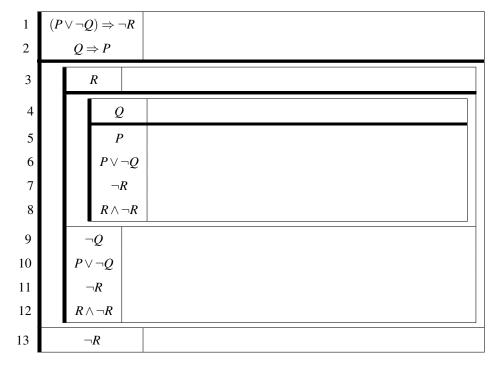**Name:** _____

Student ID: _____

Assignment: Natural Deduction (Contradiction)*

Question 1. *(19 marks)* Provide a justification (rule and line numbers) for each line of these proofs.

1	$\neg C \Rightarrow B \vee C$	
2	$A \wedge \neg B$	
3	$\neg C$	
4	$B \vee C$	
5	B	
6	$\neg B$	
7	$B \wedge \neg B$	
8	$\neg\neg C$	
9	C	
10	$(A \wedge \neg B) \Rightarrow C$	

1	$(P \vee \neg Q) \Rightarrow \neg R$	
2	$Q \Rightarrow P$	
3	R	
4	Q	
5	P	
6	$P \vee \neg Q$	
7	$\neg R$	
8	$R \wedge \neg R$	
9	$\neg Q$	
10	$P \vee \neg Q$	
11	$\neg R$	
12	$R \wedge \neg R$	
13	$\neg R$	