(vi) $\sim p \vee q \vee r$ and $\sim p \wedge q \wedge r$: Both normal forms.

Remark 1.5.6. It turns out we can turn any logical proposition into either normal form.

(i) We can use the definitions to get rid of $\rightarrow$, $\leftrightarrow$, and $\underline{\vee}$.

(ii) Use De Morgan's laws to move any $\sim$ in past original statement, so they sit on the variables.

(iii) Use double negation to get rid of any $\sim\sim$ that showed up.

(iv) Use the distributive rules to move things in/out of original statement as we need to.

Example 1.5.7. Converting $\sim((\sim p \rightarrow \sim q) \wedge \sim r)$ to conjunctive normal form.

$\sim((\sim p \rightarrow \sim q) \wedge \sim r)$	$\equiv \sim((\sim\sim p \vee \sim q) \wedge \sim r)$	Definition
	$\equiv \sim((p \vee \sim q) \wedge \sim r)$	Double negation
	$\equiv \sim(p \vee \sim q) \vee \sim\sim r$	De Morgan's
	$\equiv \sim (p \vee \sim q) \vee r$	Double negation
	$\equiv (\sim p \wedge \sim\sim q) \vee r$	De Morgan's
	$\equiv (\sim p \wedge q) \vee r$	Double negation : disjunctive normal form
	$\equiv (\sim p \vee r) \wedge (q \vee r)$	Distributive : conjunctive normal form

It was actually in disjunctive normal form in the second-last step.