

$$(p \rightarrow q) \vdash (\neg p \vee q)$$

1.  $(p \rightarrow q)$  Premise

2. $\neg(\neg p \vee q)$	Assumption
3. $(p \wedge \neg q)$	2, DeMorgan
4. $p$	3, $\wedge$ -Elim
5. $q$	4, 1, $\rightarrow$ -Elim
6. $(p \wedge \neg q) \wedge q$	3, 5 $\wedge$ -Intro
7. $p \wedge \perp$	6, Associativity Contradiction
8. $\perp$	7, Identity

9.  $(\neg p \vee q)$  2-8  $\neg$ -Introduction