1. ¬P ∨ ¬Q	$\vdash \neg P \lor \neg Q$
2. ¬P	⊢ ¬P
3. P ∧ Q	$\vdash \ P \land Q \qquad \qquad $
4. $P \wedge Q$	⊢ P3,∧E
5. ¬P, P ∧ Q	⊢ ¬P2
6. ¬P	$\vdash \neg (P \land Q)$
7. ¬Q	⊢ ¬Q
8. P ∧ Q	⊢ Q
9. $\neg Q, P \wedge Q$	⊢ ¬Q7
10. ¬Q	$\vdash \neg (P \land Q)$
11. ¬P∨¬Q	$\vdash \neg (P \land Q)$
12.	$\vdash (\neg P \lor \neg O) \supset \neg (P \land O) \qquad \dots \qquad 11. \supset I$