

$$\begin{array}{c}
\frac{\overline{A \vee B}^1}{\overline{\neg A \wedge \neg B}^0} \wedge_{E_l} \quad \frac{\overline{\neg A}^2}{\overline{A}^2} \neg_E \quad \frac{\overline{\neg A \wedge \neg B}^0}{\overline{\neg B}^2} \wedge_{E_r} \quad \frac{\overline{\neg B}^2}{\overline{B}^2} \neg_E \\
\frac{\overline{A \vee B}^1}{\perp} \vee_E \\
\frac{\perp}{\overline{\neg(A \vee B)}^1} \neg_I \\
\frac{\overline{\neg(A \vee B)}^1}{\overline{\neg A \wedge \neg B \rightarrow \neg(A \vee B)}^0} \rightarrow_I
\end{array}$$