

$$\frac{\mathcal{A} \wedge \mathcal{B}}{\mathcal{A}} \text{ [E}\wedge\text{1]} \quad \frac{\mathcal{A} \wedge \mathcal{B}}{\mathcal{B}} \text{ [E}\wedge\text{2]} \quad \frac{\mathcal{A} \quad \mathcal{B}}{\mathcal{A} \wedge \mathcal{B}} \text{ [I}\wedge\text{]}$$

$$\frac{\mathcal{A} \vee \mathcal{B} \quad \begin{array}{c} [\mathcal{A}]^{[i]} \\ \vdots \\ \mathcal{C} \end{array} \quad \begin{array}{c} [\mathcal{B}]^{[j]} \\ \vdots \\ \mathcal{C} \end{array}}{\mathcal{C}} \text{ [E}\vee\text{]}^{[i,j]} \quad \frac{\mathcal{A}}{\mathcal{A} \vee \mathcal{B}} \text{ [I}\vee\text{1]} \quad \frac{\mathcal{B}}{\mathcal{A} \vee \mathcal{B}} \text{ [I}\vee\text{2]}$$

$$\frac{\mathcal{A} \quad \mathcal{A} \Rightarrow \mathcal{B}}{\mathcal{B}} \text{ [E}\Rightarrow\text{]} \quad \frac{\begin{array}{c} [\mathcal{A}]^{[i]} \\ \vdots \\ \mathcal{B} \end{array}}{\mathcal{A} \Rightarrow \mathcal{B}} \text{ [I}\Rightarrow\text{]}^{[i]}$$

$$\frac{\mathcal{A} \Leftrightarrow \mathcal{B}}{\mathcal{A} \Rightarrow \mathcal{B}} \text{ [E}\Leftrightarrow\text{1]} \quad \frac{\mathcal{A} \Leftrightarrow \mathcal{B}}{\mathcal{B} \Rightarrow \mathcal{A}} \text{ [E}\Leftrightarrow\text{2]} \quad \frac{\mathcal{A} \Rightarrow \mathcal{B} \quad \mathcal{B} \Rightarrow \mathcal{A}}{\mathcal{A} \Leftrightarrow \mathcal{B}} \text{ [I}\Leftrightarrow\text{]}$$

$$\frac{\neg\neg\mathcal{A}}{\mathcal{A}} \text{ [E}\neg\text{]} \quad \frac{\begin{array}{c} [\mathcal{A}]^{[i]} \\ \vdots \\ \perp \end{array}}{\neg\mathcal{A}} \text{ [I}\neg\text{]}^{[i]} \quad \frac{\perp}{\mathcal{A}} \text{ [E}\perp\text{]} \quad \frac{\mathcal{A} \quad \neg\mathcal{A}}{\perp} \text{ [I}\perp\text{]}$$