

Using proof macro (Makoto Tatsuta's `proof.sty`):
research.nii.ac.jp/~tatsuta/proof-sty.html

Example 1 (simple):

$$\frac{\Gamma \vdash A \quad \Gamma \vdash B}{\Gamma \vdash A \wedge B}$$

Example 2 (nested):

$$\frac{\frac{\Gamma \vdash A \quad \Gamma \vdash B}{\Gamma \vdash A \wedge B} \quad \Gamma \vdash C \vee D}{\Gamma \vdash (A \wedge B) \wedge (C \vee D)}$$

Example 3 (deduce and infer*):

$$\frac{\frac{\Gamma \vdash A \quad \text{(some comments)} \quad \Gamma \vdash B}{\Gamma \vdash A \wedge B} \quad \begin{array}{c} \Gamma \vdash E \\ \vdots \\ \Gamma \vdash C \vee D \end{array}}{\Gamma \vdash (A \wedge B) \wedge (C \vee D)}$$

Example 4 (with rule names):

$$\frac{\frac{\Gamma \vdash A \quad \text{(some comments)} \quad \Gamma \vdash B}{\Gamma \vdash A \wedge B} \wedge I \quad \begin{array}{c} \Gamma \vdash E \\ \vdots \\ \Gamma \vdash C \vee D \end{array} \wedge I}{\Gamma \vdash (A \wedge B) \wedge (C \vee D)} \wedge I$$

Another package to draw proofs: `bussproofs.sty`.