

$$\frac{\alpha \quad \beta}{\alpha \wedge \beta} \text{con\_i.} \quad \frac{\alpha \wedge \beta}{\alpha} \text{con\_e1 } (\beta). \quad \frac{\alpha \wedge \beta}{\beta} \text{con\_e2 } (\alpha).$$

$$\frac{\alpha}{\alpha \vee \beta} \text{dis\_i1.} \quad \frac{\beta}{\alpha \vee \beta} \text{dis\_i2.} \quad \frac{\alpha \vee \beta \quad \begin{array}{c} \overline{\alpha} \text{ h1} \\ \vdots \\ \gamma \end{array} \quad \begin{array}{c} \overline{\beta} \text{ h2} \\ \vdots \\ \gamma \end{array}}{\gamma} \text{dis\_e } (\alpha \vee \beta) \text{ h1 h2.}$$

$$\frac{\begin{array}{c} \overline{\alpha} \text{ h} \\ \vdots \\ \beta \end{array}}{\alpha \rightarrow \beta} \text{imp\_i h.} \quad \frac{\alpha \rightarrow \beta \quad \alpha}{\beta} \text{imp\_e } (\alpha).$$

$$\frac{\begin{array}{c} \overline{\alpha} \text{ h} \\ \vdots \\ \perp \end{array}}{\neg \alpha} \text{neg\_i h.} \quad \frac{\neg \alpha \quad \alpha}{\perp} \text{neg\_e } (\alpha). \quad \frac{\perp}{\gamma} \text{fls\_e.} \quad \frac{\begin{array}{c} \neg \alpha \text{ h} \\ \vdots \\ \perp \end{array}}{\alpha} \text{PBC h.}$$

$$\frac{\begin{array}{c} \overline{\alpha} \text{ h1} \\ \vdots \\ \beta \end{array} \quad \begin{array}{c} \overline{\beta} \text{ h2} \\ \vdots \\ \alpha \end{array}}{\alpha \leftrightarrow \beta} \text{iff\_i h1 h2.} \quad \frac{\alpha \leftrightarrow \beta \quad \beta}{\alpha} \text{iff\_e1 } (\beta). \quad \frac{\alpha \leftrightarrow \beta \quad \alpha}{\beta} \text{iff\_e2 } (\alpha).$$