



## Lista de Reglas de Deducción Natural

### Reglas Básicas

#### Regla Trivial

$$\frac{\phi}{\phi} t$$

#### Conjunción

$$\frac{\phi \quad \psi}{\phi \wedge \psi} i_{\wedge}$$

$$\frac{\phi \wedge \psi}{\phi} e_{\wedge_1}$$

$$\frac{\phi \wedge \psi}{\psi} e_{\wedge_2}$$

#### Disyunción

$$\frac{\phi}{\phi \vee \psi} i_{\vee_1}$$

$$\frac{\psi}{\phi \vee \psi} i_{\vee_2}$$

$$\frac{\phi \vee \psi \quad \begin{array}{c} [\phi]^{(1)} \\ \vdots \\ \gamma \end{array} \quad \begin{array}{c} [\psi]^{(2)} \\ \vdots \\ \gamma \end{array}}{\gamma} e_{\vee(1)(2)}$$

#### Implicancia

$$\frac{\begin{array}{c} [\phi]^{(1)} \\ \vdots \\ \psi \end{array}}{\phi \rightarrow \psi} i_{\rightarrow(1)}$$

$$\frac{\phi \quad \phi \rightarrow \psi}{\psi} e_{\rightarrow}$$

#### Negación

$$\frac{\neg\neg\phi}{\phi} e_{\neg\neg}$$

$$\frac{\begin{array}{c} [\phi]^{(1)} \\ \vdots \\ \perp \end{array}}{\neg\phi} i_{\neg(1)}$$

#### Bottom

$$\frac{\phi \quad \neg\phi}{\perp} i_{\perp}$$

$$\frac{\perp}{\phi} e_{\perp}$$

### Reglas Derivadas

$$\frac{\begin{array}{c} \Gamma \\ \vdots \\ \phi \end{array} \quad \begin{array}{c} \Delta \quad \phi \\ \vdots \\ \psi \end{array}}{\psi} RC \quad \frac{\phi \rightarrow \psi \quad \neg\psi}{\neg\phi} MT \quad \frac{\begin{array}{c} [\neg\phi]^{(1)} \\ \vdots \\ \perp \end{array}}{\phi} RAA^{(1)} \quad \frac{}{\phi \vee \neg\phi} TND$$