

CR 17

Formules

$\wedge \vee \rightarrow \neg \perp \top$

$(\forall \exists)$

$\square \diamond \circ$

$\top \wedge (A \rightarrow B \rightarrow A) \rightarrow \begin{matrix} \top \checkmark \\ A \rightarrow B \rightarrow A \end{matrix}$

Sequents

$A \vdash B \rightarrow A \rightarrow A, B \vdash A \checkmark$

$A_1, \dots, A_n \vdash B_1, \dots, B_m$

$B_1 \wedge \dots \wedge B_m$

$(A_1 \wedge \dots \wedge A_n) \rightarrow (B_1 \vee \dots \vee B_m)$

prover A clat prover $\vdash A$

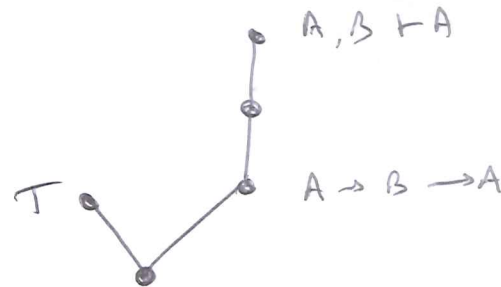
$A, B \vdash A$

$A \vdash B \rightarrow A$

$\vdash A \rightarrow B \rightarrow A$

$\vdash \top$

$\vdash \top \wedge (A \rightarrow B \rightarrow A)$



$$\frac{\Gamma \vdash A \quad \Gamma \vdash B}{\Gamma \vdash A \wedge B} \quad \text{ID} \quad \text{a}$$

multiplicatif

$$\frac{\Gamma \vdash A, B}{\Gamma \vdash A \vee B} \quad \text{ID}$$

$$\frac{\Gamma \vdash A \quad \Gamma \vdash B}{\Gamma \vdash A \vee B} \quad \text{ID}$$

additif

correcteur:
règles logiques
sans correcteur:
règles structurales

$$\frac{\Gamma, \neg A \vdash \text{---}}{\Gamma \vdash A} \quad \text{EG}$$

~~$$\frac{\Gamma \vdash A, \Delta \quad \Gamma, A \vdash \Delta'}{\Gamma \vdash \Delta, \Delta'}$$~~

~~$$\frac{\Gamma \vdash T}{\Gamma \vdash T} \quad \text{ID}$$~~

~~$$\frac{\Gamma, A, \Delta \vdash A}{\Gamma, A, \Delta \vdash A}$$~~

multiplicatif

$$\frac{\Gamma, A \wedge B \vdash \Delta}{\Gamma, A \wedge B \vdash \Delta} \quad \text{ID}$$

$$\frac{\Gamma \vdash A \rightarrow B \quad \Gamma, A \vdash B}{\Gamma, A \vdash B} \quad \text{ED}$$

$$\frac{\Gamma \vdash A \quad \Gamma \vdash \neg A}{\Gamma \vdash \perp} \quad \text{ED}$$

~~$$\frac{\Gamma \vdash \perp}{\Gamma \vdash \Sigma} \quad \text{ED}$$~~

$$\frac{\Gamma \vdash \perp}{\Gamma \vdash} \quad \text{ED}$$

$$\frac{\Gamma \vdash A \wedge B}{\Gamma \vdash A} \quad \text{DE} \quad \text{a}$$

$$\frac{\Gamma \vdash A \wedge B}{\Gamma \vdash B} \quad \text{DE} \quad \text{a}$$

$$\frac{A \vdash C \quad B \vdash C}{A \vee B \vdash C} \quad \text{IG}$$

$$\frac{\Gamma, A \vdash B, \Delta}{\Gamma \vdash A \rightarrow B, \Delta} \quad \text{ID}$$

additif

$$\frac{\Gamma, A \vdash \Delta \quad \Gamma, B \vdash \Delta}{\Gamma, A \wedge B \vdash \Delta} \quad \text{IG}$$

$$\frac{\Gamma \vdash A, \Delta \quad \Gamma, B \vdash \Delta}{\Gamma, A \rightarrow B \vdash \Delta} \quad \text{ID}$$

$$\frac{\Gamma \vdash \Delta}{\Gamma \vdash \Delta, \Sigma} \quad \text{ID}$$

~~$$\frac{\Gamma \vdash A \quad \Gamma, B \vdash \Delta}{\Gamma, A \rightarrow B \vdash \Delta} \quad \text{IG}$$~~

$$\frac{\Gamma_1 \vdash A, \Delta_1 \quad \Gamma_2 \vdash B \vdash \Delta_2}{\Gamma_1, \Gamma_2, A \leftrightarrow B \vdash \Delta_1, \Delta_2} \quad \text{IG} \rightarrow$$

affaiblissement

$$\text{ID} \wedge \text{additif} \\ \frac{\Gamma \vdash A, \Delta \quad \Gamma \vdash B, \Delta}{\Gamma \vdash A \wedge B, \Delta}$$

$$\text{ID} \wedge \text{multiplicatif} \\ \frac{\Gamma_1 \vdash A, \Delta_1 \quad \Gamma_2 \vdash B, \Delta_2}{\Gamma_1, \Gamma_2 \vdash A \wedge B, \Delta_1, \Delta_2}$$

$$\frac{A, A \vdash}{A, A \vdash}$$

$$G \frac{\Gamma, A, B, \Delta \vdash \Sigma}{\Gamma, B, A, \Delta \vdash \Sigma}$$

$$D \frac{\Gamma \vdash \Delta, A, B, \Sigma}{\Gamma \vdash \Delta, B, A, \Sigma}$$

$$D \frac{\Gamma \vdash A, A, \Delta}{\Gamma \vdash A, \Delta}$$

structurelles

Echange

contraction

structurelle

$$\frac{\Gamma, A, A \vdash \Delta}{\Gamma, A \vdash \Delta}$$

$$\frac{B, A \vdash}{A, B \vdash}$$

$$\frac{A, A \vdash}{A, A \vdash}$$

additif

$$\Gamma \vdash T, \Delta$$

additif

$$\Gamma, A \vdash A, \Delta$$

multiplicatif

$$\Gamma \vdash T$$

multiplicatif

$$A \vdash A$$

$$\frac{\Gamma \vdash A, \Delta \quad \Gamma, A \vdash \Delta}{\Gamma \vdash \Delta}$$

additif

$$\frac{\Gamma_1 \vdash A, \Delta_1 \quad \Gamma_2, A \vdash \Delta_2}{\Gamma_1, \Gamma_2 \vdash \Delta_1, \Delta_2}$$

multiplicatif

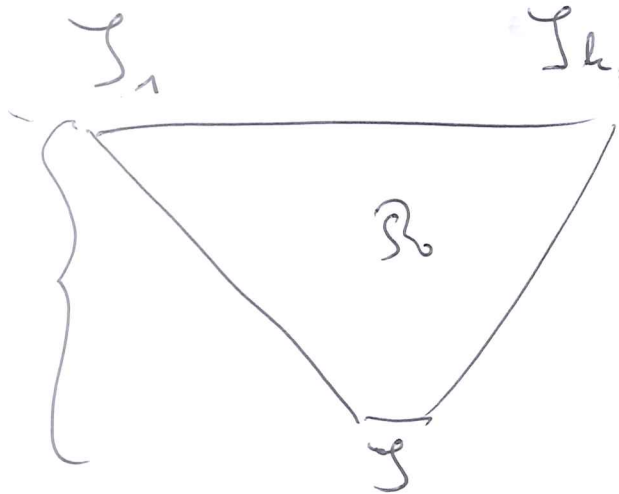
Règle dérivable

$$\frac{\mathcal{I}_1 \quad \dots \quad \mathcal{I}_k}{\mathcal{I}} \text{ R. règle k-aire}$$

\mathcal{B}_0 ensemble de règles

R est dérivable dans \mathcal{B}_0

si j'ai une preuve



$$\frac{\frac{\frac{\text{ax m}}{A \vdash A} \text{ wk G}}{\Gamma, A \vdash A} \text{ wk D}}{\Gamma, A \vdash A, \Delta} \text{ ax m}$$

- wk
- esc + m alors add. dérivable
- ctr + a alors nul. dérivable

IDV

$$\frac{\frac{\frac{\Gamma \vdash A, B, \Delta}{\Gamma \vdash A, A \vee B, \Delta} \text{ va}_1}{\Gamma \vdash A \vee B, A \vee B, \Delta} \text{ ctr D}}{\Gamma \vdash A \vee B, \Delta} \text{ va}_2$$