Prop

$A \wedge B$

- bevezetési szabály
- kiküszöbölési — " —

$$\frac{A \qquad B}{A \wedge B}$$

"Lakó" = "bizonyíték"

— " — = "program"

"term"

leaf length f : Tree → nat

$$\frac{a : A \qquad b : B}{(a, b) : A \wedge B}$$

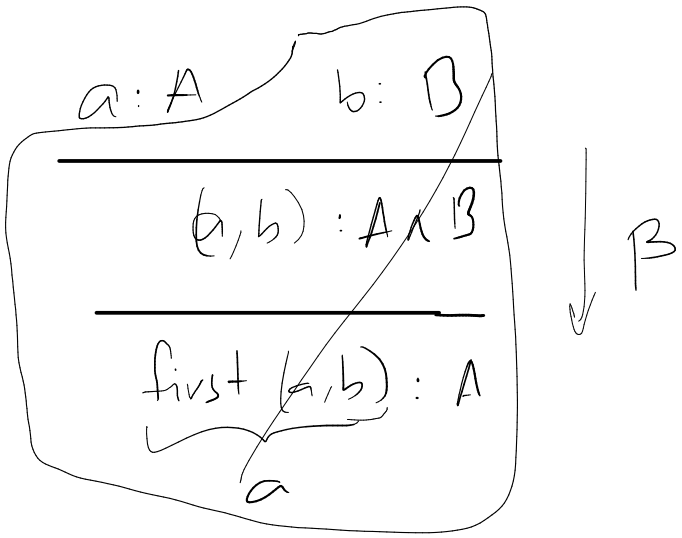
(conjab — " —)

→elim

$$\frac{P : Prop \quad x : A,\ y : B \vdash s : P \qquad \vdash t : A \wedge B}{\vdash and_1(x.y.s, t) : P}$$

⇒destruktor

$$\frac{t : A \wedge B}{first\ (t) : A} \qquad \frac{t : A \wedge B}{second\ t : B}$$



Ha, ... alles

$A \to B$

$$\frac{A \to B \quad A}{B}$$

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

$$\frac{f : A \to B \quad a : A}{f\,a : B}$$

$$\frac{x : A \vdash t : B}{\lambda x.t : A \to B}$$

(f $ a)

(fun x : A, t : B) : A → B

abstraktion

Vagy

bev:

$$\frac{A}{A \vee B} \qquad \frac{B}{A \vee B}$$

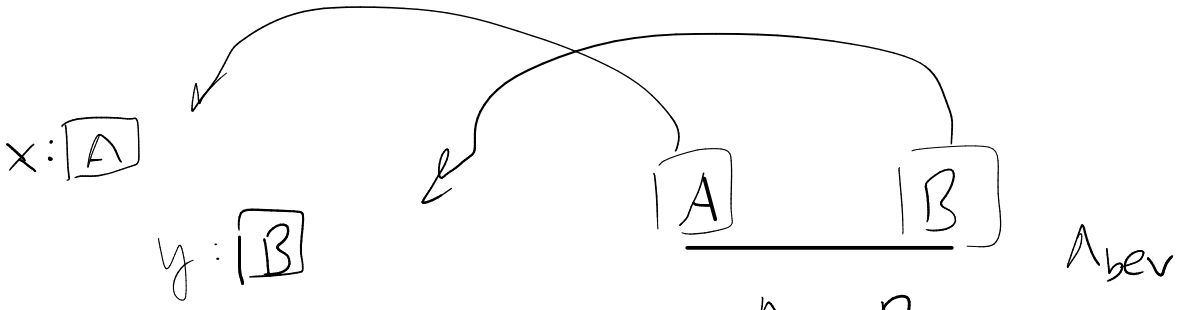
$$\frac{\vdash t : A}{\vdash \mathrm{left}\ t : A \vee B} \rightarrow \frac{!}{!}$$

lih. ESETSZÉTVÁLASZTÁS

$$\frac{A \vee B \qquad \begin{matrix} A \\ \vdots \\ C \end{matrix} \qquad \begin{matrix} B \\ \vdots \\ C \end{matrix}}{C}$$

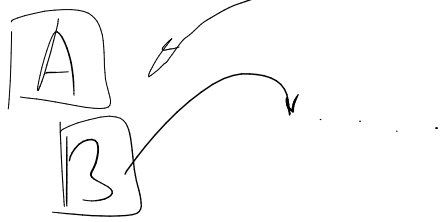
$$\frac{t : A \vee B \qquad x : A \vdash p_1 : C \qquad y : B \vdash p_2 : C}{\vdash \mathrm{or}_i(x.p_1; y.p_2; t) : C}$$

① $A \to (B \to A \wedge B)$



$$\dfrac{\dfrac{\dfrac{A \quad B}{A \wedge B}\wedge_{bev}}{B \to A \wedge B}}{A \to (B \to A \wedge B)}$$

② $A \to (B \to (A \vee B))$



$$\dfrac{\dfrac{\dfrac{\overline{A}\ \text{assumption}}{A \vee B}\ \text{left}}{B \to A \vee B}}{A \to (B \to (A \vee B))}$$

③ $A \wedge (B \vee C) \vdash (A \wedge B) \vee (A \wedge C)$