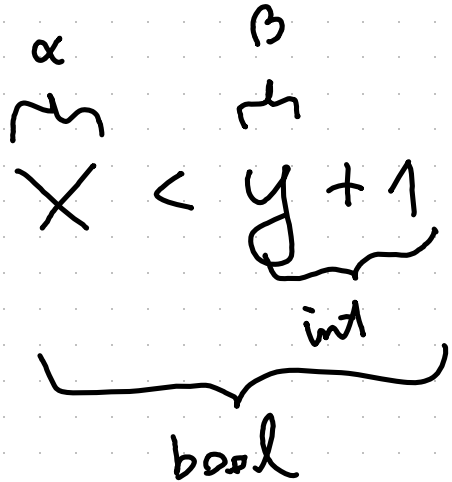
$x : \alpha$
$y : \beta$



$\beta = int$
$\alpha = int$

$$\frac{\Gamma \vdash x \Rightarrow \alpha \mid \varnothing \qquad \dfrac{\Gamma \vdash y \Rightarrow \beta \mid \varnothing \qquad \Gamma \vdash 1 \Rightarrow int \mid \varnothing}{\Gamma \vdash y + 1 \Rightarrow int \mid \beta = int,\ int = int}}{\underbrace{x : \alpha, y : \beta}_{\Gamma} \vdash x < y + 1 \Rightarrow bool \mid \alpha = int,\ int = int,\ \beta = int,\ int = int}$$

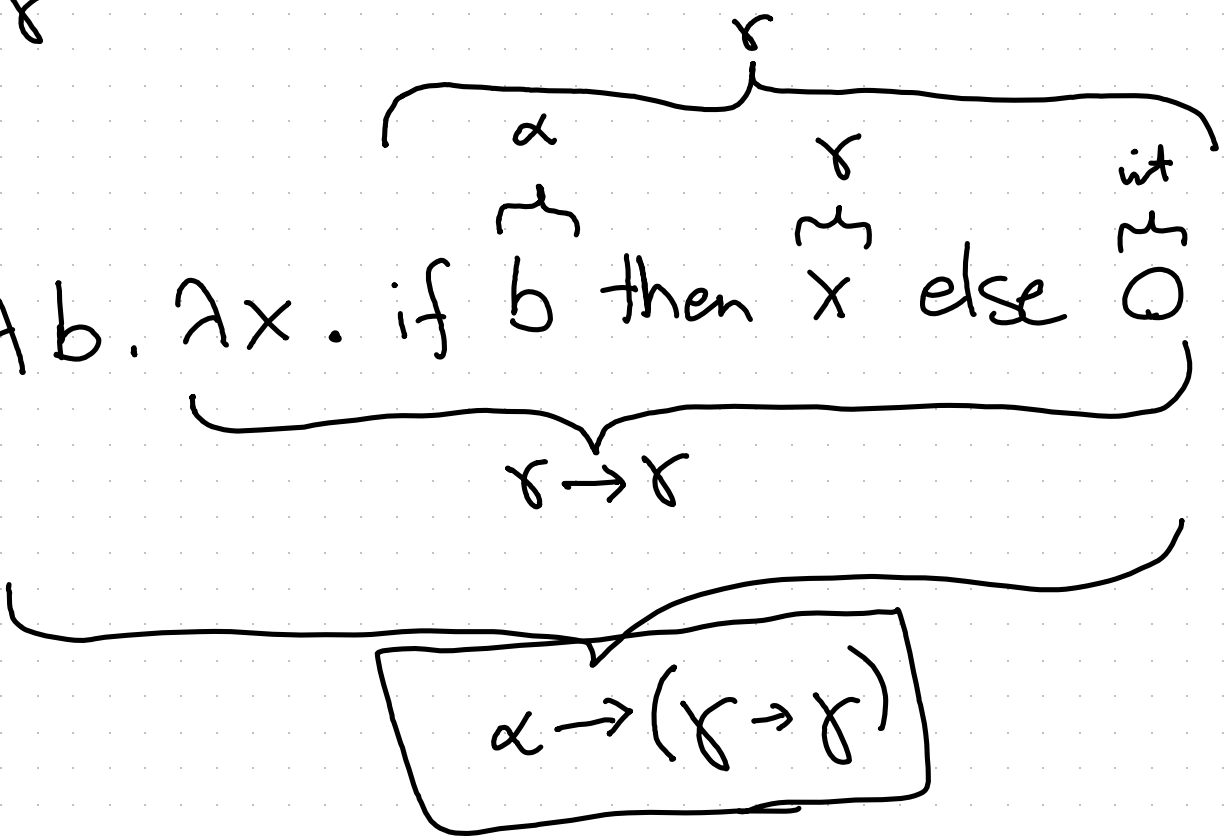
KONTEKST

$b : \alpha$

$x : \gamma$

ENAČBE

$\alpha = bool$, $\gamma = int$

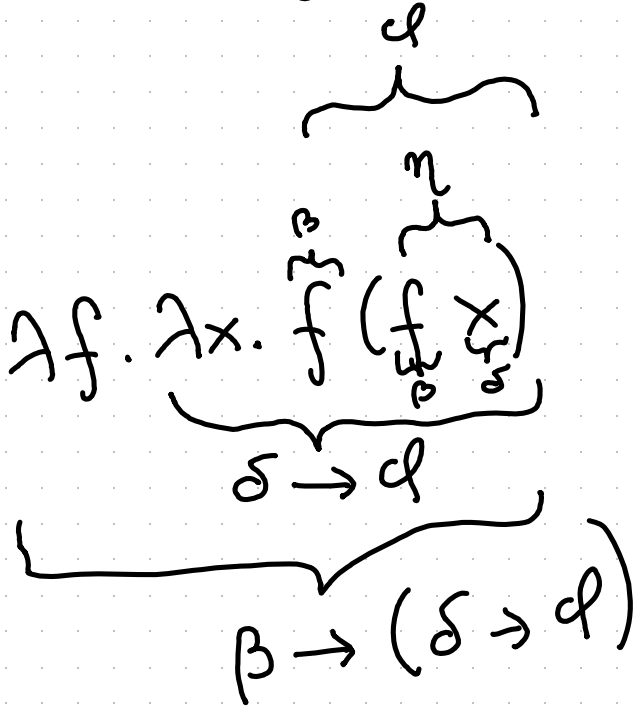


$f : \beta$

$x : \delta$

$\beta = \delta \to \eta$

$\beta = \eta \to \varphi$



$$\dfrac{\dfrac{\dfrac{}{\Gamma \vdash p : \beta} \quad \dfrac{}{\Gamma \vdash x : \delta}}{\Gamma \vdash p\ x : \varphi} \quad \dfrac{\dfrac{}{\Gamma \vdash f : \gamma} \quad \dfrac{}{\Gamma \vdash x : \delta}}{\Gamma \vdash f\ x : \varepsilon} \quad \dfrac{}{\Gamma \vdash x : \delta}}{\underbrace{p : \beta,\ f : \gamma,\ x : \delta}_{\Gamma} \vdash \text{if } p\ x \text{ then } f\ x \text{ else } x : \delta}$$

$$\dfrac{}{p : \beta,\ f : \gamma \vdash \lambda x.\ \text{if } p\ x \text{ then } f\ x \text{ else } x : \delta \to \delta}$$

$$\dfrac{}{p : \beta \vdash \lambda f\, x.\ \text{if } p\ x \text{ then } f\ x \text{ else } x : \gamma \to (\delta \to \delta)}$$

$$\dfrac{}{\bullet \vdash \lambda p\, f\, x.\ \text{if } p\ x \text{ then } f\ x \text{ else } x : \beta \to (\gamma \to (\delta \to \delta))}$$

$$(\delta \mapsto \text{bool}) \to ((\delta \to \delta) \to (\delta \to \delta))$$

ENAČBE

$\gamma = \delta \to \varepsilon$
$\beta = \delta \to \varphi$
$\varepsilon = \delta$
$\varphi = \text{bool}$

$\rightsquigarrow$

$\gamma = \delta \to \delta$
$\beta = \delta \to \varphi$
$\varphi = \text{bool}$

$\varepsilon \mapsto \delta$

$\rightsquigarrow$

$\gamma = \delta \to \delta$
$\beta = \delta \to \text{bool}$

$\varepsilon \mapsto \delta$
$\varphi \mapsto \text{bool}$

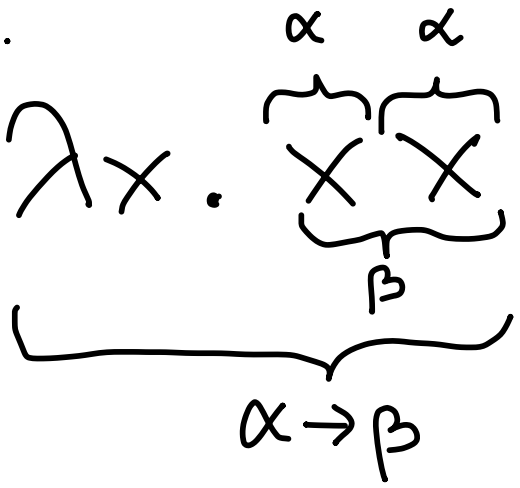
$\rightsquigarrow\rightsquigarrow$

$\gamma \mapsto \delta \to \delta$
$\beta \mapsto \delta \to \text{bool}$
$\varepsilon \mapsto \delta$
$\varphi \mapsto \text{bool}$

$\infty \leftarrow \infty \leftarrow (\infty \to \infty) \leftarrow (\infty \to \infty)$

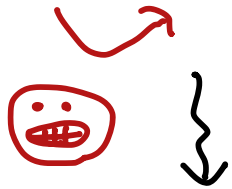
kontekst

$x : \alpha$

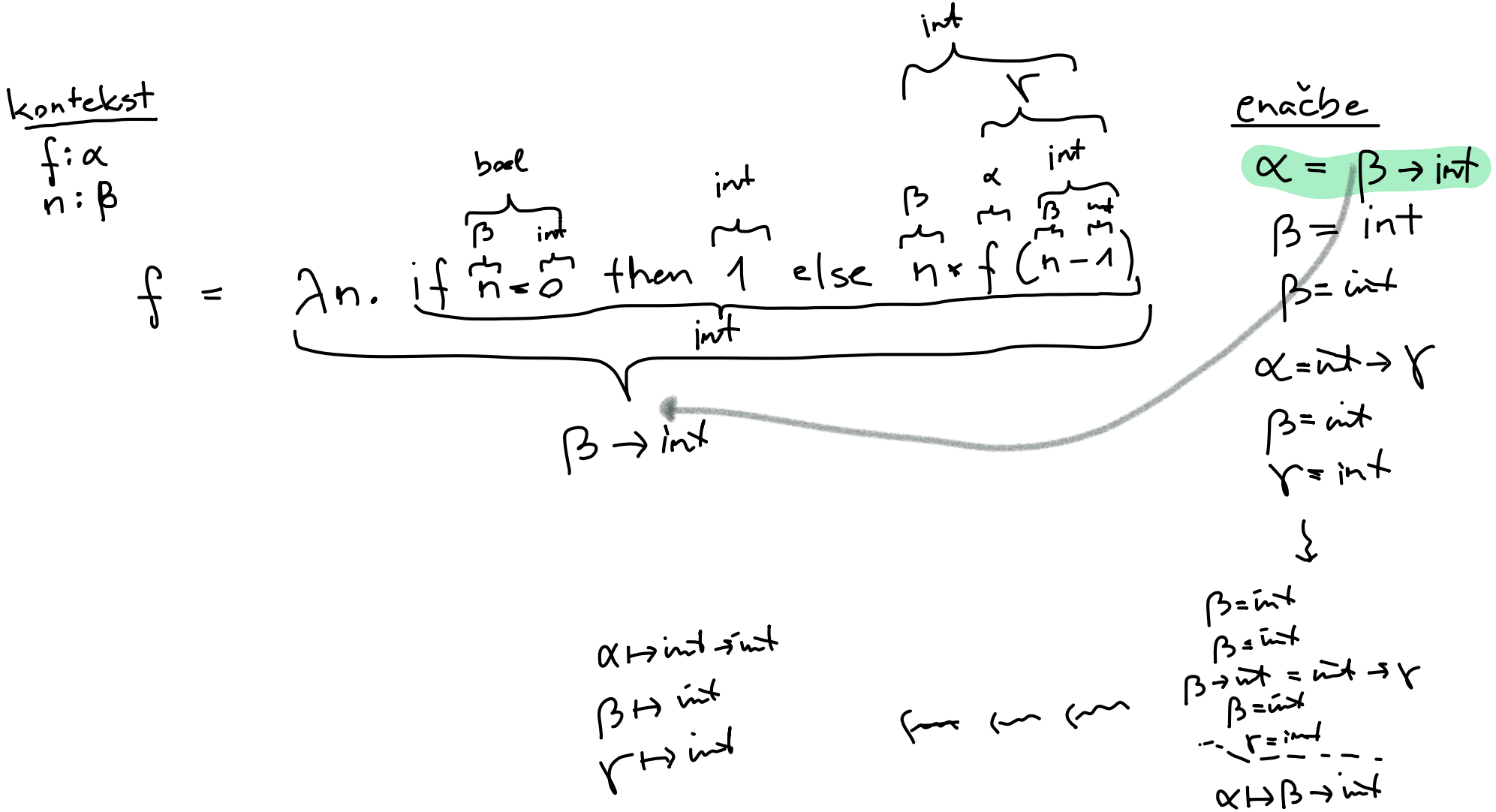


enačbe

$\alpha = \alpha \to \beta$



NI REŠITVE


kontekst
f : α
n : β
f = λn. if n = 0 then 1 else n * f (n - 1)
bool
β int
int
int
β α int
β int
γ
β → int
enačbe
α = β → int
β = int
β = int
α = int → γ
β = int
γ = int
α ↦ int → int
β ↦ int
γ ↦ int
β = int
β = int
β → int = int → γ
β = int
γ = int
α ↦ β → int