

3-7
Je gauran ihggetro (hghghgh gh htn

$$\begin{aligned} & \neg \exists x (G(x) \wedge \neg H(x)) \\ & \neg \exists x (H(x) \wedge \neg G(x)) \\ & \neg \exists x (H(x) \wedge G(x) \wedge \neg \beta) \\ & \neg \exists x (H(x) \wedge G(x) \wedge \neg \beta) \end{aligned}$$
$$\begin{array}{l} X: \tilde{\tau} \in X \mid \tilde{\tau}, \text{ f. } \tilde{\tau} \Rightarrow \tau \\ \hline X: \tau, \text{ f. } \tilde{\tau} \Rightarrow \tau \vdash X: \tau \\ \hline \text{f. } \tilde{\tau} \Rightarrow \tau \vdash \lambda_X X: \tilde{\tau} \Rightarrow \tau \\ \hline \vdash \lambda_X \lambda_X X: (\tilde{\tau} \Rightarrow \tau) \Rightarrow \tilde{\tau} \Rightarrow \tau \end{array}$$

3.6. induction, u $C_{n+1} = \lambda_1 \lambda_x f^{n+1} x = \lambda_1 \lambda_x f(f^n x) \stackrel{\beta}{=} \lambda_1 \lambda_x f(C_n f x)$

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$\frac{\vee}{\vdash \bar{\tau} \Rightarrow \bar{\tau}}$

$\cup \Pi$

$$\frac{\vdash \bar{\tau} \Rightarrow \bar{\tau}, x: \bar{\tau} \vdash \text{Cn}(\bar{\tau} \Rightarrow \bar{\tau}) \Rightarrow \bar{\tau} \Rightarrow \bar{\tau}}{\vdash \bar{\tau} \Rightarrow \bar{\tau}}$$

$$\frac{\vdash \bar{\tau} \Rightarrow \bar{\tau} \text{ or } \vdash \bar{\tau} \Rightarrow \bar{\tau}, x: \bar{\tau} \vdash \bar{\tau} \Rightarrow \bar{\tau}, x: \bar{\tau} \vdash \text{Cn}(\bar{\tau} \Rightarrow \bar{\tau}) \Rightarrow \bar{\tau} \Rightarrow \bar{\tau} \text{ or } \vdash \bar{\tau} \Rightarrow \bar{\tau}}{\vdash \bar{\tau} \Rightarrow \bar{\tau}}$$

$$\frac{\vdash \bar{\tau} \Rightarrow \bar{\tau}, x: \bar{\tau} \vdash \bar{\tau} \Rightarrow \bar{\tau} \quad \vdash \bar{\tau} \Rightarrow \bar{\tau}, x: \bar{\tau} \vdash \text{Cn}(\bar{\tau} \Rightarrow \bar{\tau}) \Rightarrow \bar{\tau} \Rightarrow \bar{\tau}}{\vdash \bar{\tau} \Rightarrow \bar{\tau}}$$

$$\frac{\vdash \bar{\tau} \Rightarrow \bar{\tau}, x: \bar{\tau} \vdash \vdash (\text{Cn}(\bar{\tau} \Rightarrow \bar{\tau})) : \bar{\tau}}{\vdash \bar{\tau} \Rightarrow \bar{\tau}}$$

$$\frac{\vdash \bar{\tau} \Rightarrow \bar{\tau} \vdash \lambda x. \vdash (\text{Cn}(\bar{\tau} \Rightarrow \bar{\tau})) : \bar{\tau} \Rightarrow \bar{\tau}}{\vdash \bar{\tau} \Rightarrow \bar{\tau}}$$

$$\vdash \lambda x. \lambda x. \vdash (\text{Cn}(\bar{\tau} \Rightarrow \bar{\tau})) : (\bar{\tau} \Rightarrow \bar{\tau}) \Rightarrow \bar{\tau} \Rightarrow \bar{\tau}$$