$$\frac{}{x : \tau \vdash x : \tau}\ \text{identity}$$

$$\frac{\Gamma \vdash \tau : \mathit{type} \qquad \Delta \vdash x : \tau}{\Gamma, \Delta \vdash (x :: \tau) : \tau}\ \text{annotation}$$

$$\frac{\Gamma, y : \tau, x : \sigma, \Delta \vdash z : \upsilon}{\Gamma, x : \sigma, y : \tau, \Delta \vdash z : \upsilon}\ \text{exchange}$$

$$\frac{\Gamma \vdash t : \tau}{\Gamma, x : \mathit{unit} \vdash t : \tau}\ \text{unit}_{\text{L}}$$

$$\frac{}{\vdash \langle\rangle : \mathit{unit}}\ \text{unit}_{\text{R}}$$

$$\frac{\Gamma, x : \sigma \vdash t : \tau}{\Gamma \vdash \mathit{lambda}\ x :: \sigma.t : \mathit{forall}\ x :: \sigma.\tau}\ \text{abstraction}$$

$$\frac{\Gamma \vdash f : \mathit{forall}\ x :: \sigma.\tau \qquad \Delta \vdash t : \sigma}{\Gamma, \Delta \vdash (f\ t) : \tau}\ \text{application}$$

$$\frac{\Gamma \vdash t : \tau \qquad \cdots \qquad \Delta \vdash u : \upsilon}{\Gamma, \cdots, \Delta \vdash \{t, \cdots, u\} : \{\tau * \cdots * \upsilon\}}\ \text{pair}$$

$$\frac{\Gamma, x_1 : \tau_1, \cdots, x_n : \tau_n \vdash u : \upsilon \qquad \Delta \vdash t : \{\tau_1 * \cdots * \tau_n\}}{\Gamma, \Delta \vdash \mathit{let}\ \{x_1, \cdots, x_n\} = t\ \mathit{in}\ u : \upsilon}\ \text{let}$$

$$\frac{\Gamma \vdash x : \tau_i}{\Gamma \vdash \langle c_i\ x\rangle : c_1\ \mathit{of}\ \tau_1 + \cdots + c_i\ \mathit{of}\ \tau_i + \cdots + c_n\ \mathit{of}\ \tau_n}\ \text{injection}_{\text{i}}$$

$$\frac{\Gamma, x_1 : \tau_1 \vdash u_1 : \upsilon \qquad \cdots \qquad \Gamma, x_n : \tau_n \vdash u_n : \upsilon \qquad \Delta \vdash t : c_1\ \mathit{of}\ \tau_1 + \cdots + c_i\ \mathit{of}\ \tau_i + \cdots + c_n\ \mathit{of}\ \tau_n}{\Gamma, \Delta \vdash \mathit{case}\ t\ \mathit{of}\ \langle c_1\ x_1\rangle\ \Rightarrow\ u_1 \mid \cdots \mid \langle c_n\ x_n\rangle\ \Rightarrow\ u_n : \upsilon}\ \text{case}$$

$$\frac{}{\vdash \mathit{type} : \mathit{type}}\ \text{type}$$

$$\frac{}{\vdash \mathit{unit} : \mathit{type}}\ \text{unit}$$

$$\frac{\Gamma, \Delta \vdash (x :: \sigma) : \sigma \qquad \Delta \vdash \tau : \mathit{type}}{\Gamma, \Delta \vdash \mathit{forall}\ x :: \sigma.\tau : \mathit{type}}\ \text{forall}$$

$$\frac{\Gamma \vdash \sigma : \mathit{type} \qquad \cdots \qquad \Delta \vdash \tau : \mathit{type}}{\Gamma, \cdots, \Delta \vdash \{\sigma * \cdots * \tau\} : \mathit{type}}\ \text{product}$$

$$\frac{\Gamma \vdash \tau_1 : \mathit{type} \qquad \cdots \qquad \Delta \vdash \tau_n : \mathit{type}}{\Gamma, \cdots, \Delta \vdash c_1\ \mathit{of}\ \tau_1 + \cdots + c_i\ \mathit{of}\ \tau_i + \cdots + c_n\ \mathit{of}\ \tau_n : \mathit{type}}\ \text{sum}$$

$$\frac{\Gamma, x : \tau \vdash t : \tau}{\Gamma \vdash \mathit{fix}\ x :: \tau.t : \tau}\ \text{fixpoint(これいら無くない?)}$$

$$\frac{\Gamma \vdash x : \tau}{\Gamma \vdash |x| : \{\tau * \tau\}}\ \text{duplication}$$

$$\frac{\Gamma \vdash x : \{\tau * \tau\}}{\Gamma \vdash |x| : \tau}\ \text{equality}$$