

$\Gamma \triangleright M : \tau$ Term M has type τ in context Γ

$$\frac{\Gamma \triangleright M : \tau \quad \Gamma \triangleright N : \sigma}{\Gamma \triangleright \langle M, N \rangle : \tau \times \sigma} \text{pair}$$

$$\frac{\Gamma \triangleright M : \tau \times \sigma}{\Gamma \triangleright \text{fst } M : \tau} \text{fst} \quad \frac{\Gamma \triangleright M : \tau \times \sigma}{\Gamma \triangleright \text{snd } M : \sigma} \text{snd}$$

$$\frac{\Gamma, u : \tau \triangleright M : \sigma}{\Gamma \triangleright (\lambda u : \tau. M) : \tau \rightarrow \sigma} \text{lam} \quad \frac{u : \tau \text{ in } \Gamma}{\Gamma \triangleright u : \tau} \text{var}$$

$$\frac{\Gamma \triangleright M : \tau \rightarrow \sigma \quad \Gamma \triangleright N : \tau}{\Gamma \triangleright M N : \sigma} \text{app}$$

$$\frac{\Gamma \triangleright M : \tau}{\Gamma \triangleright \text{inl}^\sigma M : \tau + \sigma} \text{inl} \quad \frac{\Gamma \triangleright N : \sigma}{\Gamma \triangleright \text{inr}^\tau N : \tau + \sigma} \text{inr}$$

$$\frac{\Gamma \triangleright M : \tau + \sigma \quad \Gamma, u : \tau \triangleright N_1 : \nu \quad \Gamma, w : \sigma \triangleright N_2 : \nu}{\Gamma \triangleright (\mathbf{case } M \mathbf{ of inl } u \Rightarrow N_1 \mid \text{inr } w \Rightarrow N_2) : \nu} \text{case}$$

$$\frac{}{\Gamma \triangleright \langle \rangle : 1} \text{unit} \quad \frac{\Gamma \triangleright M : 0}{\Gamma \triangleright \text{abort}^\nu M : \nu} \text{abort}$$