Annotated Type Rules

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1 Type system

$$\begin{array}{c} \hline Typing \\ \hline \hline \Gamma \vdash c : \tau_c \end{array} [con] \\ \hline \frac{\Gamma \left(x\right) = \tau}{\Gamma \vdash x : \tau} \left[var\right] \\ \hline \frac{\Gamma \left[x \mapsto \tau_x\right] \vdash e_0 : \tau_0}{\Gamma \vdash fn_\pi x \Rightarrow e_0 : \tau_x \to \tau_0} \left[fn\right] \\ \hline \frac{\Gamma \left[f \mapsto \tau_x \to \tau_0\right] \left[x \mapsto \tau_x\right] \vdash e_0 : \tau_0}{\Gamma \vdash fun_\pi f \; x \Rightarrow e_0 : \tau_x \to \tau_0} \left[fun\right] \end{array}$$

Figure 1: Typing