For each instance of the typing relation, define a denotation morphism: $[\![\Phi \mid \Gamma \vdash v\colon A]\!]_M : \mathbb{C}(I)(\Gamma_I, A_I)$. Writing Γ_I and A_I for $[\![\Phi \vdash \Gamma\mathtt{Ok}]\!]_M$ and $[\![\Phi \vdash A\colon \mathtt{Type}]\!]_M$.

For each ground constant, $\mathtt{C}^A$, there exists $c : \mathtt{1} \to A_I$ in $\mathbb{C}(I)$.

- (Unit) $\dfrac{\Phi\vdash\Gamma\mathtt{Ok}}{[\![\Phi|\Gamma\vdash\mathtt{()}:\mathtt{Unit}]\!]_M=\langle\rangle_\Gamma:\Gamma_I\to\mathtt{1}}$
- (Const) $\dfrac{\Phi\vdash\Gamma\mathtt{Ok}}{[\![\Phi|\Gamma\vdash\mathtt{C}^A:A]\!]_M=[\![\mathtt{C}^A]\!]_M\circ\langle\rangle_\Gamma:\Gamma\to[\![A]\!]_M}$
- (True) $\dfrac{\Phi\vdash\Gamma\mathtt{Ok}}{[\![\Phi|\Gamma\vdash\mathtt{true}:\mathtt{Bool}]\!]_M=\mathtt{inl}\circ\langle\rangle_\Gamma:\Gamma\to[\![\mathtt{Bool}]\!]_M=\mathtt{1}+\mathtt{1}}$
- (False) $\dfrac{\Phi\vdash\Gamma\mathtt{Ok}}{[\![\Phi|\Gamma\vdash\mathtt{false}:\mathtt{Bool}]\!]_M=\mathtt{inr}\circ\langle\rangle_\Gamma:\Gamma\to[\![\mathtt{Bool}]\!]_M=\mathtt{1}+\mathtt{1}}$
- (Var) $\dfrac{\Phi\vdash\Gamma\mathtt{Ok}}{[\![\Phi|\Gamma,x:A\vdash x:A]\!]_M=\pi_2:\Gamma\times A\to A}$
- (Weaken) $\dfrac{f=[\![\Phi|\Gamma\vdash x:A]\!]_M:\Gamma\to A}{[\![\Phi|\Gamma,y:B\vdash x:A]\!]_M=f\circ\pi_1:\Gamma\times B\to A}$
- (Lambda) $\dfrac{f=[\![\Phi|\Gamma,x:A\vdash v:B]\!]_M:\Gamma\times A\to B}{[\![\Phi|\Gamma\vdash\lambda x:A.v:A\to B]\!]_M=\mathtt{cur}(f):\Gamma\to(B)^A}$
- (Subtype) $\dfrac{f=[\![\Phi|\Gamma\vdash v:A]\!]_M:\Gamma\to A \quad g=[\![A\leq:_\Phi B]\!]_M}{[\![\Phi|\Gamma\vdash v:B]\!]_M=g\circ f:\Gamma\to B}$
- (Return) $\dfrac{f=[\![\Phi|\Gamma\vdash v:A]\!]_M}{[\![\Phi|\Gamma\vdash\mathtt{return}\,v:\mathtt{M}_{\mathtt{1}}A]\!]_M=\eta_A\circ f}$
- (If) $\dfrac{f=[\![\Phi|\Gamma\vdash v:\mathtt{Bool}]\!]_M:\Gamma\to\mathtt{1}+\mathtt{1} \quad g=[\![\Phi|\Gamma\vdash v_1:\mathtt{M}_\epsilon A]\!]_M \quad h=[\![\Phi|\Gamma\vdash v_2:\mathtt{M}_\epsilon A]\!]_M}{[\![\Phi|\Gamma\vdash\mathtt{if}_{\epsilon,A}\ v\ \mathtt{then}\ v_1\ \mathtt{else}\ v_2:\mathtt{M}_\epsilon A]\!]_M=\mathtt{app}\circ(([\mathtt{cur}(g\circ\pi_2),\mathtt{cur}(h\circ\pi_2)]\circ f)\times\mathtt{Id}_\Gamma)\circ\delta_\Gamma:\Gamma\to T_\epsilon A}$
- (Bind) $\dfrac{f=[\![\Phi|\Gamma\vdash v_1:\mathtt{M}_{\epsilon_1}A:\Gamma\to T_{\epsilon_1}A \quad g=[\![\Phi|\Gamma,x:A\vdash v_2:\mathtt{M}_{\epsilon_2}B]\!]_M]\!]_M:\Gamma\times A\to T_{\epsilon_2}B}{[\![\Phi|\Gamma\vdash\mathtt{do}\ x\leftarrow v_1\ \mathtt{in}\ v_2:\mathtt{M}_{\epsilon_1\cdot\epsilon_2}B]\!]_M=\mu_{\epsilon_1,\epsilon_2,B}\circ T_{\epsilon_1}g\circ\mathtt{t}_{\Gamma,A,\epsilon_1}\circ\left\langle\mathtt{Id}_\Gamma,f\right\rangle:\Gamma\to T_{\epsilon_1\cdot\epsilon_2}B}$
- (Apply) $\dfrac{f=[\![\Phi|\Gamma\vdash v_1:A\to B]\!]_M:\Gamma\to(B)^A \quad g=[\![\Phi|\Gamma\vdash v_2:A]\!]_M:\Gamma\to A}{[\![\Phi|\Gamma\vdash v_1\ v_2:\beta]\!]_M=\mathtt{app}\circ\langle f,g\rangle:\Gamma\to B}$
- (Effect-Lambda) $\dfrac{f=[\![\Phi,\alpha|\Gamma\vdash v:A]\!]_M:\mathbb{C}(I\times U,W)(\Gamma,A)}{[\![\Phi|\Gamma\vdash\Lambda\alpha.A:\forall\epsilon.A]\!]_M=\overline{f}:\mathbb{C}(I)(\Gamma,\forall_I(A))}$
- (Effect-App) $\dfrac{g=[\![\Phi|\Gamma\vdash v:\forall\alpha.A]\!]_M:\mathbb{C}(I)(\Gamma,\forall_I(A)) \quad h=[\![\Phi\vdash\epsilon:\mathtt{Effect}]\!]_M:\mathbb{C}(I,U)}{[\![\Phi|\Gamma\vdash v\ \epsilon:A[\epsilon/\alpha]]\!]_M=\left\langle\mathtt{Id}_I,h\right\rangle^*(\epsilon_{[\![\Phi,\beta\vdash A[\beta/\alpha]:\mathtt{Type}]\!]_M})\circ g:\mathbb{C}(I)(\Gamma,A[\epsilon/\alpha])}$