$$\frac{\mathsf{ufp}(\mathsf{c}) = u}{\Gamma \vdash \mathtt{c\#p} \ : \ \mathtt{Float}[\mathtt{u}, \mathtt{p}]} \qquad \frac{x : \mathtt{Float}[\mathtt{u}, \mathtt{p}] \in \Gamma}{\Gamma \vdash x \ : \ \mathtt{Float}[\mathtt{u}, \mathtt{p}]}$$

$$\mathtt{+} : \Pi u_1 : \mathtt{int}.\Pi p_1 : \mathtt{int}.\Pi u_2 : \mathtt{int}.\Pi p_2 : \mathtt{int}.$$
$$\mathtt{Float}[\mathtt{u}_1, \mathtt{p}_1] \to \mathtt{Float}[\mathtt{u}_2, \mathtt{p}_2] \to \mathtt{Float}[\mathtt{u}_1 + \mathtt{u}_2 + 1, \mathtt{u}_1 + \mathtt{u}_2 + 1 - \max\left(\mathtt{u}_1 - \mathtt{p}_1, \mathtt{u}_2 - \mathtt{p}_2\right) - \iota\big(\mathtt{u}_1 - \mathtt{p}_1, \mathtt{u}_2 - \mathtt{p}_2\big)]$$

$$\mathtt{+} : \Pi \mathtt{u}_1 : \mathtt{int}, \mathtt{p}_1 : \mathtt{int}, \mathtt{u}_2 : \mathtt{int}, \mathtt{p}_2 : \mathtt{int}.$$
$$\mathtt{Float}[\mathtt{u}_1, \mathtt{p}_1] \to \mathtt{Float}[\mathtt{u}_2, \mathtt{p}_2] \to \mathtt{Float}[\mathcal{U}_+(\mathtt{u}_1, \mathtt{u}_2), \mathcal{P}_+(\mathtt{u}_1, \mathtt{u}_2)]$$

$$\frac{\Gamma, x : \mathsf{T}_1 \vdash e : \mathsf{T}_2}{\Gamma \vdash \lambda x : \mathsf{T}_1.e : \Pi x : \mathsf{T}_1.\mathsf{T}_2} \qquad \frac{\Gamma \vdash e_1 : \Pi x : \mathsf{T}_1.\mathsf{T}_2 \qquad \Gamma \vdash e_2 : \mathsf{T}_1}{\Gamma \vdash e_1 \ e_2 : \mathsf{T}_2[x \mapsto e_2]}$$