$$\frac{}{\Vdash \emptyset}\ (\mathsf{empty}) \qquad \frac{\Vdash \Box\Gamma}{\Box\Gamma \vdash \mathbb{L}_i : \Box\mathbb{L}_{i+1}}\ (\mathsf{univ}) \qquad \frac{\Gamma \vdash A : \Box\mathbb{L}_i}{\Gamma \vdash A : \Box\mathbb{L}_{i+1}}\ (\mathsf{hier})$$

$$\frac{\Gamma \vdash A : \Box\mathbb{L}_i}{\Vdash \Gamma, x : A}\ (\mathsf{ext}) \qquad \frac{\Vdash \Box\Gamma, x : A}{\Box\Gamma, x : A \vdash x : A}\ (\mathsf{var})$$

$$\frac{\Gamma \vdash A : \Box\mathbb{L}_i \qquad \Delta, x : A \vdash B : \Box\mathbb{L}_i}{\Gamma, \Delta \vdash \Pi(x : A).\, B : \Box\mathbb{L}_i}\ (\Pi)$$

$$\frac{\Gamma, x : A \vdash e : B}{\Gamma \vdash \lambda x.\, e : \Pi(x : A).\, B}\ (\Pi_\mathsf{i}) \qquad \frac{\Gamma \vdash e_1 : \Pi(x : A).\, B \qquad \Delta \vdash e_2 : A}{\Gamma, \Delta \vdash e_1 @ e_2 : B[e_1/x]}\ (\Pi_\mathsf{e})$$

$$\frac{\Gamma \vdash A : \Box\mathbb{L}_i \qquad \Delta, x : A \vdash B : \Box\mathbb{L}_i}{\Gamma, \Delta \vdash \Sigma(x : A).\, B : \Box\mathbb{L}_i}\ (\Sigma)$$

$$\frac{\Gamma \vdash e_1 : A \qquad \Delta \vdash e_2 : B[e_1/x]}{\Gamma, \Delta \vdash (e_1, e_2) : \Sigma(x : A).\, B}\ (\Sigma_\mathsf{i}) \qquad \frac{\Gamma \vdash e_1 : \Sigma(x : A).\, B \qquad \Delta, x : A, y : B \vdash e_2 : C[(x, y)/z]}{\Gamma, \Delta \vdash \mathsf{let}\ (x, y) = e_1\ \mathsf{in}\ e_2 : C[e_1/z]}\ (\Sigma_\mathsf{e})$$

$$\frac{\Gamma \vdash A : \Box\mathbb{L}_i}{\Gamma \vdash \Box A : \Box\mathbb{L}_i}\ (\Box)$$

$$\frac{\Box\Gamma \vdash e : A}{\Box\Gamma \vdash \mathsf{box}\, e : \Box A}\ (\Box_\mathsf{i}) \qquad \frac{\Box\Gamma \vdash e : \Box A}{\Box\Gamma \vdash \mathsf{unbox}\, e : A}\ (\Box_\mathsf{e})$$

$$\frac{\Gamma \vdash A : \Box\mathbb{L}_i}{\Gamma \vdash [A\, ; n] : \Box\mathbb{L}_i}\ (\mathsf{array})$$

$$\frac{\Gamma_1 \vdash e_1 : A \qquad \ldots \qquad \Gamma_n \vdash e_n : A}{\Gamma_1, \ldots, \Gamma_n \vdash [e_1, \ldots, e_n] : [A\, ; n]}\ (\mathsf{array}_\mathsf{i})$$

$$\frac{\Gamma \vdash e_1 : [A\, ; n] \qquad \Delta, x_1 : A, \ldots, x_n : A \vdash e_2 : B}{\Gamma, \Delta \vdash \mathsf{let}\ [x_1, \ldots, x_n] = e_1\ \mathsf{in}\ e_2 : B}\ (\mathsf{array}_\mathsf{e})$$

$$\frac{\Box\Gamma, x : \Box A \vdash e : \Box A}{\Box\Gamma \vdash \mathsf{rec}\, x.\, e : \Box A}\ (\mathsf{rec})$$

$$\frac{\Gamma \vdash e : B}{\Gamma, x : \Box A \vdash e : B}\ (\mathsf{wkg}) \qquad \frac{\Gamma, x : \Box A, y : \Box A \vdash e : B}{\Gamma, x : \Box A \vdash e[x/y] : B}\ (\mathsf{ctr})$$

A type A is relevant if $\vdash e : A \to A \otimes A$ is derivable for some e.

A type A is affine if $\vdash e : A \to \top$ is derivable for some e.

A term e is a well-typed closed proper term if (1) $\vdash e : A$ is derivable for some type A, and (2) for any variable x in e, if it occurs more than once, then the type of x is relevant. If it doesn't occur, then the type of x is affine. (3) All the free variables in a recursion-term ($\mathsf{rec}\, x.\, e$) must be relevant.