

**RuleZer**

$$\frac{}{* : ?A \vdash * : ?A} Id$$

**RuleCut**

$$\frac{\Theta, * : FA \vdash \Delta \quad \Gamma \vdash * : FA}{\Gamma, \Theta \vdash \Delta} Cut$$

**RuleStruct**

$$\frac{(\Gamma_1, \Delta_1), \Gamma_2, \Delta_2 \vdash \Theta}{(\Gamma_1, \Gamma_2), \Delta_1, \Delta_2 \vdash \Theta} PL \quad \frac{\Theta \vdash (\Delta_1, \Gamma_1), \Delta_2, \Gamma_2}{\Theta \vdash (\Delta_1, \Delta_2), \Gamma_1, \Gamma_2} PR \quad \frac{\Gamma \vdash (\Delta_1, \Delta_2), \Delta_3}{\Gamma \vdash \Delta_1, \Delta_2, \Delta_3} AR$$

$$\frac{\Gamma \vdash \Delta_1, \Delta_2, \Delta_3}{\Gamma \vdash (\Delta_1, \Delta_2), \Delta_3} AR \quad \frac{(\Delta_1, \Delta_2), \Delta_3 \vdash \Gamma}{\Delta_1, \Delta_2, \Delta_3 \vdash \Gamma} AL \quad \frac{\Delta_1, \Delta_2, \Delta_3 \vdash \Gamma}{(\Delta_1, \Delta_2), \Delta_3 \vdash \Gamma} AL$$

$$\frac{\cdot, \Gamma \vdash \Delta}{\Gamma \vdash \Delta} IL_L$$

$$\frac{\Gamma \vdash \Delta}{\cdot, \Gamma \vdash \Delta} IL_L$$

$$\frac{\Gamma, \cdot \vdash \Delta}{\Gamma \vdash \Delta} IL_R$$

$$\frac{\Gamma \vdash \Delta}{\Gamma, \cdot \vdash \Delta} IL_R$$

$$\frac{\Gamma \vdash \cdot, \Delta}{\Gamma \vdash \Delta} IR_L$$

$$\frac{\Gamma \vdash \Delta}{\Gamma \vdash \cdot, \Delta} IR_L$$

$$\frac{\Gamma \vdash \Delta, \cdot}{\Gamma \vdash \Delta} IR_R$$

$$\frac{\Gamma \vdash \Delta}{\Gamma \vdash \Delta, \cdot} IR_R$$

**RuleU**

$$\frac{\Gamma, * : FA, * : FB \vdash * : FC}{\Gamma, * : FA \otimes FB \vdash * : FC} \otimes_L$$

$$\frac{\Gamma, * : FA \vdash * : FB}{\Gamma \vdash * : FA \multimap FB} \multimap_R$$

**RuleBin**

$$\frac{\Delta \vdash * : FB \quad \Gamma \vdash * : FA}{\Gamma, \Delta \vdash * : FA \otimes FB} \otimes_R$$

$$\frac{\Delta, * : FB \vdash * : FC \quad \Gamma \vdash * : FA}{\Gamma, \Delta, * : FA \multimap FB \vdash * : FC} \multimap_L$$

**RuleNat**

$$\begin{array}{c} \frac{}{\cdot \vdash Z : Nat} \text{nat}_0 \qquad \frac{\cdot \vdash n : Nat}{\cdot \vdash (S)n : Nat} \text{nat}_s \qquad \frac{\cdot \vdash Z : Nat}{\cdot \vdash * : even(Z)} \text{even}_b \\[1em] \frac{\cdot \vdash * : even(n)}{\cdot \vdash * : even((S)(S)n)} \text{even}_s \end{array}$$