$$\overline{\Gamma \vdash \texttt{true} : \text{bool}} \qquad \overline{\Gamma \vdash \texttt{false} : \text{bool}}$$

$$\frac{n \in \textbf{Int}}{\Gamma \vdash n : \text{int}} \qquad \overline{\Gamma \vdash \texttt{[]} : \alpha \text{ list}}$$

$$\frac{\Gamma \vdash e_1 : \text{int} \qquad \Gamma \vdash e_2 : \text{int}}{\Gamma \vdash e_1 + e_2 : \text{int}} \qquad \frac{\Gamma \vdash e_1 : \text{int} \qquad \Gamma \vdash e_2 : \text{int}}{\Gamma \vdash e_1 - e_2 : \text{int}}$$

$$\frac{\Gamma \vdash e_1 : \text{int} \qquad \Gamma \vdash e_2 : \text{int}}{\Gamma \vdash e_1 * e_2 : \text{int}} \qquad \frac{\Gamma \vdash e_1 : \text{int} \qquad \Gamma \vdash e_2 : \text{int}}{\Gamma \vdash e_1/e_2 : \text{int}}$$

$$\frac{\Gamma \vdash e_1 : \alpha \qquad \Gamma \vdash e_2 : \alpha}{\Gamma \vdash e_1 = e_2 : \text{bool}}$$

$$\frac{\Gamma \vdash e_1 : \alpha \qquad \Gamma \vdash e_2 : \alpha \text{ list}}{\Gamma \vdash e_1 :: e_2 : \alpha \text{ list}}$$

$$\frac{\Gamma \vdash e_1 : \text{bool} \qquad \Gamma \vdash e_2 : \alpha \qquad \Gamma \vdash e_3 : \alpha}{\Gamma \vdash \texttt{if } e_1 \texttt{ then } e_2 \texttt{ else } e_3 : \alpha}$$

$$\frac{\Gamma(e_1) = \alpha}{\Gamma \vdash e_1 : \alpha}\text{(monomorphic)} \qquad \frac{\Gamma(e_1) = \forall \tau_1 \ldots \tau_n.\alpha}{\Gamma \vdash e_1 : \alpha[\vec{\tau}/\vec{\mu}]}\text{(polymorphic)}$$

$$\frac{\Gamma \vdash e_1 : \alpha \to \beta \qquad \Gamma \vdash e_2 : \alpha}{\Gamma \vdash e_1 \ e_2 : \beta}$$

$$\frac{\Gamma \vdash e_1 : \alpha \qquad \tau_1 \ldots \tau_n = \text{FV}_\Gamma(\alpha) \qquad \Gamma, v : \forall \tau_1 \ldots \tau_n.\alpha \vdash e_2 : \beta}{\Gamma \vdash \texttt{let } v = e_1 \texttt{ in } e_2 : \beta}$$

$(\text{FV}_\Gamma(\alpha): \alpha$ Γ $)$

$$\frac{\Gamma, v : \alpha \vdash e_1 : \alpha \qquad \tau_1 \ldots \tau_n = \text{FV}_\Gamma(\alpha) \qquad \Gamma, v : \forall \tau_1 \ldots \tau_n.\alpha \vdash e_2 : \beta}{\Gamma \vdash \texttt{let rec } v = e_1 \texttt{ in } e_2 : \beta}$$