

$$\begin{array}{c}
\frac{}{\Gamma, x : (B - > (B - > D)) \vdash x : (B - > (B - > D))} \text{ (Var)} \quad \frac{}{\Gamma, y : B \vdash y : B} \text{ (Var)} \\
\hline
\frac{}{\Gamma \vdash xy : (B - > D)} \text{ (App)} \quad \frac{}{\Gamma, y : B \vdash y : B} \text{ (Var)} \\
\hline
\frac{}{\Gamma \vdash xyy : D} \text{ (App)} \quad \frac{}{\Gamma, y : B \vdash y : B} \text{ (Var)} \\
\hline
\frac{}{\Gamma \vdash \lambda y. xyy : B \rightarrow D} \text{ (Abs)} \\
\hline
\frac{}{\Gamma \vdash \lambda x. (\lambda y. xyy) : (B - > (B - > D)) \rightarrow (B - > D)} \text{ (Abs)}
\end{array}$$