prftree usepackage

https://www.ctan.org/pkg/prftree

$$\frac{\left[x:A\right]^{??}}{\lambda y:B.x:B\to A}\operatorname{Lam} \\ \frac{\lambda x:A.\lambda y:B.x:A\to (B\to A)}{\lambda x:A.\lambda y:B.x:A\to (B\to A)}$$

tikz-qtree usepackage

https://ctan.org/pkg/tikz-qtree

$$\{x:(A\to B)\to A,y:A\}\vdash y:B$$

$$\{x:(A\to B)\to A\}\vdash x:(A\to B)\to A \quad \{x:(A\to B)\to A\}\vdash \lambda y.?^3:A\to B$$

$$\{x:(A\to B)\to A\}\vdash x?^2:A$$

$$\vdash \lambda x.?:((A\to B)\to A)\to A$$