

$$\begin{array}{c}
\text{p1} \quad \text{p3} \quad \text{p3} \\
\frac{}{p[x \rightarrow tx, t \rightarrow tr] \vdash 1 : \text{int}} \quad \frac{p[f \rightarrow \forall a . a \rightarrow a] (f) = \forall a . a \rightarrow \text{int}}{p3} \quad \frac{p[f \rightarrow \forall a . a \rightarrow a] (f) = \forall a . a \rightarrow \text{int}}{p3} \\
\frac{}{p1} \quad \frac{p[f \rightarrow \forall a . a \rightarrow a] \vdash f : tx \rightarrow \text{int}}{p9} \quad \frac{p[f \rightarrow \forall a . a \rightarrow a] \vdash f : tx}{p3} \\
\frac{p[x \rightarrow tx, t \rightarrow tr] \vdash 1 : \text{int} \quad p[f \rightarrow \forall a . a \rightarrow a] \vdash f : t \rightarrow \text{int}}{p8} \quad \frac{p \vdash \text{let } f \, x = 1 \text{ in } f \text{ end}}{p8}
\end{array}$$