

$$\begin{aligned}
& \forall e, \begin{cases} \forall x, P(\mathbf{FVar} \ x) \\ \forall e_1 \ e_2, P(e_1) \implies P(e_2) \implies P(\mathbf{App} \ e_1 \ e_2) \\ \forall L, (\forall x \notin L, P(e^x)) \implies P(\mathbf{Lam} \ e) \end{cases} \\
& \implies (\forall e, \mathbf{lc} \ e \implies P(e))
\end{aligned}$$