

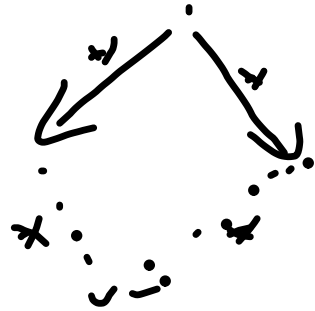
$T ::= v \mid c \mid (\lambda t) \mid (\lambda x. t)$

$\lambda x a b . a x b$

$\lambda x f b . f x b$

$\lambda x . (\lambda a (\lambda b . a x b))$

$\lambda x . (\lambda a . (\lambda b . (a x) b))$



$(\lambda x. xx) (\lambda x. xx)$

$$suc = \lambda n. (\lambda f x. f (n f x))$$

$$suc \ 2 + 10 =$$

$$(\lambda n f x. f (n f x)) (\lambda f x. x) \rightarrow \beta$$

$$\lambda f x. f (\lambda f x. x) f x \rightarrow \beta$$

$$\lambda f x. f x$$

$$\begin{array}{c}
 \hline
 [x \leftarrow \alpha, y \leftarrow \beta] \vdash x :: \alpha \\
 \hline
 \lambda
 \end{array}
 \quad
 \begin{array}{c}
 \hline
 [x \leftarrow \alpha] \vdash \lambda y. x :: \beta \Rightarrow \alpha \\
 \hline
 \lambda
 \end{array}$$

$$\hline
 [] \vdash \lambda x y. x :: \alpha \Leftrightarrow (\beta \Rightarrow \alpha)$$