$var$, $x$ term variable

| | | | | |
|---|---|---|---|---|
| $term,\ t$ | ::= | | | term |
| | \| | $x$ | | variable |
| | \| | $\lambda x.t$ | bind $x$ in $t$ | lambda |
| | \| | $t\ t'$ | | app |
| | \| | $(t)$ | S | |
| | \| | $\{t/x\}t'$ | M | |
| $val,\ v$ | ::= | | | value |
| | \| | $\lambda x.t$ | | lambda |
| $terminals$ | ::= | | | |
| | \| | $\lambda$ | | |
| | \| | $\longrightarrow$ | | |
| $formula$ | ::= | | | |
| | \| | $judgement$ | | |
| $Jop$ | ::= | | | |
| | \| | $t_1 \longrightarrow t_2$ | | $t_1$ reduces to $t_2$ |
| $judgement$ | ::= | | | |
| | \| | $Jop$ | | |
| $user\_syntax$ | ::= | | | |
| | \| | $var$ | | |
| | \| | $term$ | | |
| | \| | $val$ | | |
| | \| | $terminals$ | | |

$\boxed{t_1 \longrightarrow t_2}$ $t_1$ reduces to $t_2$

$$\frac{}{(\lambda x.t_1)\, v_2 \longrightarrow \{v_2/x\}t_1}\ \text{AX\_APP}$$

$$\frac{t_1 \longrightarrow t_1'}{t_1\ t \longrightarrow t_1'\ t}\ \text{CTX\_APP\_FUN}$$

$$\frac{t_1 \longrightarrow t_1'}{v\ t_1 \longrightarrow v\ t_1'}\ \text{CTX\_APP\_ARG}$$