termvar, x, y	term variable			
t	::=			term
	|	x		variable
	|	$\lambda x.t$	bind x in t	lambda
	|	$t\,t'$		app
	|	(t)	S	
	|	$[t/x]t'$	M	
v	::=			value
	|	$\lambda x.t$		lambda
terminals	::=			
	|	λ		
	|	$\longrightarrow$		
	|	$\in$		
	|	$\neq$		
	|	$\equiv_\alpha$		
	|	$\equiv_\beta$		
	|	FV		
	|	$\notin$		
formula	::=			
	|	*judgement*		
	|	$x \neq x'$	M	
	|	$x \notin FV(t)$	M	
Jop	::=			
	|	$t_1 \longrightarrow t_2$		t_1 reduces to t_2
	|	$x \in \mathrm{FV}\,(t)$		free variable
	|	$t \equiv_\alpha t'$		alpha equivalence
	|	$t \equiv_\beta t'$		beta equivalence
judgement	::=			
	|	*Jop*		
user_syntax	::=			
	|	*termvar*		
	|	t		
	|	v		
	|	*terminals*		
	|	*formula*		

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

$$\frac{}{(\lambda x.t_{12})\,v_2 \longrightarrow [v_2/x]t_{12}} \quad \text{AX\_APP}$$

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

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

$\boxed{x \in \mathrm{FV}\,(t)}$ free variable

$$\frac{}{x \in \mathrm{FV}\,(x)} \quad \text{VAR}$$

$$\frac{x \in \mathrm{FV}\,(t_1)}{x \in \mathrm{FV}\,(t_1\ t_2)} \quad \text{APP\_L}$$

$$\frac{x \in \mathrm{FV}\,(t_2)}{x \in \mathrm{FV}\,(t_1\ t_2)} \quad \text{APP\_R}$$

$$\frac{\begin{array}{l} x \in \mathrm{FV}\,(t) \\ x \neq y \end{array}}{x \in \mathrm{FV}\,(\lambda y.t)} \quad \text{LAM}$$

$\boxed{t \equiv_\alpha t'}$ alpha equivalence

$$\frac{}{t \equiv_\alpha t} \quad \text{AEQ\_ID}$$

$$\frac{t \equiv_\alpha t'}{t' \equiv_\alpha t} \quad \text{AEQ\_SYM}$$

$$\frac{\begin{array}{l} t \equiv_\alpha t' \\ t' \equiv_\alpha t'' \end{array}}{t \equiv_\alpha t''} \quad \text{AEQ\_TRANS}$$

$$\frac{\begin{array}{l} t_1 \equiv_\alpha t_1' \\ t_2 \equiv_\alpha t_2' \end{array}}{t_1\ t_2 \equiv_\alpha t_1'\ t_2'} \quad \text{AEQ\_APP}$$

$$\frac{t \equiv_\alpha t'}{\lambda x.t \equiv_\alpha \lambda x.t'} \quad \text{AEQ\_LAM}$$

$$\frac{x' \notin FV(t)}{\lambda x.t \equiv_\alpha \lambda x'.[x'/x]t} \quad \text{AEQ\_SUBST}$$

$\boxed{t \equiv_\beta t'}$ beta equivalence

$$\frac{}{t \equiv_\beta t} \quad \text{BEQ\_ID}$$

$$\frac{t \equiv_\beta t'}{t' \equiv_\beta t} \quad \text{BEQ\_SYM}$$

$$\frac{\begin{array}{l} t \equiv_\beta t' \\ t' \equiv_\beta t'' \end{array}}{t \equiv_\beta t''} \quad \text{BEQ\_TRANS}$$

$$\frac{\begin{array}{l} t_1 \equiv_\beta t_1' \\ t_2 \equiv_\beta t_2' \end{array}}{t_1\ t_2 \equiv_\beta t_1'\ t_2'} \quad \text{BEQ\_APP}$$

$$\frac{t \equiv_\beta t'}{\lambda x.t \equiv_\beta \lambda x.t'} \quad \text{BEQ\_LAM}$$

$$\frac{}{(\lambda x.t)\ t' \equiv_\beta [t'/x]t} \quad \text{BEQ\_SUBST}$$

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Definition rules:        19 good    0 bad
Definition rule clauses: 38 good    0 bad
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