$x,\ y$

i

$V,\ W$ ::=

|	x
|	$\gamma\, x.M$
|	(i, V)
|	(V, V')

$M,\ N$ ::=

|	$\mathbf{let}\ V\ \mathbf{be}\, x.M$
|	$\mathbf{pm}\ V\ \mathbf{as}\, \{..., (i, x).M_i, ...\}$ bind x in M_i
|	$\mathbf{pm}\ V\ \mathbf{as}\, (x, y).M$
|	$\lambda\{..., i.M_i, ...\}$
|	$V \nearrow W$

A ::=

|	$\neg\, A$
|	$\Sigma_{i\in I}\, A_i$
|	1
|	$A\ \times\ A'$

Γ ::=

|	$\mathbf{empty}$
|	$\Gamma, x : A$
|	$\Gamma, x : A, \Gamma'$

terminals ::=

|	λ
|	$\vdash^n$
|	$\vdash^v$
|	$\rightarrow$
|	$\Sigma_{i\in I}$
|	$\Pi_{i\in I}$
|	$\times$
|	$\neg$
|	γ
|	$\nearrow$

formula ::=

|	*judgement*
|	$formula_1$ .. $formula_i$

Jtype ::=

|	$\Gamma \vdash^v V : A$
|	$\Gamma \vdash^n M$

judgement ::=

|	*Jtype*

user_syntax ::=

|	x

| i
| V
| M
| A
| Γ
| *terminals*
| *formula*

$\boxed{\Gamma \vdash^v V : A}$

$$\frac{}{\Gamma, x : A, \Gamma' \vdash^v x : A}\ \text{A\_VAR}$$

$$\frac{\Gamma \vdash^v V : A_i}{\Gamma \vdash^v (i,\ V) : \Sigma_{i \in I}\, A_i}\ \text{A\_SUM}$$

$$\frac{\begin{array}{c}\Gamma \vdash^v V : A \\ \Gamma \vdash^v V' : A'\end{array}}{\Gamma \vdash^v (V,\ V') : A \times A'}\ \text{A\_PAIR}$$

$$\frac{\Gamma, x : A \vdash^n M}{\Gamma \vdash^v \gamma\, x.M : \neg\, A}\ \text{A\_POINT}$$

$\boxed{\Gamma \vdash^n M}$

$$\frac{\begin{array}{c}\Gamma \vdash^v V : A \\ \Gamma, x : A \vdash^n M\end{array}}{\Gamma \vdash^n \mathbf{let}\ V\ \mathbf{be}\, x.M}\ \text{N\_LET}$$

$$\frac{\Gamma \vdash^v V : \Sigma_{i \in I}\, A_i \qquad \overline{\Gamma, x : A_i \vdash^n M_i}^{\,i}}{\Gamma \vdash^n \mathbf{pm}\ V\ \mathbf{as}\, \{..., (i, x).M_i, ...\}}\ \text{N\_PM}$$

$$\frac{\begin{array}{c}\Gamma \vdash^v V : A \times A' \\ \Gamma, x : A, y : A' \vdash^n M\end{array}}{\Gamma \vdash^n \mathbf{pm}\ V\ \mathbf{as}\, (x, y).M}\ \text{N\_UNPAIR}$$

$$\frac{\begin{array}{c}\Gamma \vdash^v V : A \\ \Gamma \vdash^v W : \neg\, A\end{array}}{\Gamma \vdash^n V \nearrow W}\ \text{N\_JUMP}$$

```
Definition rules:         8 good    0 bad
Definition rule clauses: 20 good    0 bad
```