Syntax Cheat Sheet

February 4, 2013

Syntax	**English**	**Example**
$\frac{p_1\ p_2\ \ldots\ p_n}{c}$	c can be concluded from premises p_1, p_2, ..., and p_n	$\frac{a\ nat \quad b\ nat}{plus(a,b)\ nat}$
$a \mapsto b$	a evaluates to b	N/A
$[a/x]e$	Substitute a for x in the expression e	$[4/x]times(x;y) \mapsto times(4;y)$
Γ	A set of rules	N/A
$\Gamma \vdash K$	K is logically derivable from Γ	$\frac{\Gamma \vdash x\ nat}{\Gamma \vdash succ(x)\ nat}$
$e : \tau$	e has type τ	$x : nat$
$e \Downarrow v$	e has value v	$x \Downarrow 4$
$x.e$	The variable x in the expression e	$x.times(x;y)$
let(a_1; $x.a_2$)	Let x be a_1 in a_2	$let(x; 4.times(x;y)) \mapsto times(4;y)$
ar(o) = $(s_1, s_2, ..., s_n)$	Operator o has arity $(s_1, s_2, ..., s_n)$ (i.e. it has n arguments that have sorts $s_1, s_2, ..., s_n$ respectively)	ar(let) = (Exp, (Exp)Exp)