

Page	Expression	Name	Say	Meaning
5	\mathcal{P}	Script P	Proposition	Something to be proved
5	$\mathcal{P}(a)$	Script P of a	Proposition about tree a	Something to be proved about AST a
5	\mathcal{O}	Script O	Operator	An operator that can be used in an AST
5	$\mathcal{O}(a)$	Script O of a	Operator of arity a	An operator of a given arity
5	\mathcal{X}_s	Script X sub s	Variables x of sort s	Variables x of sort s
5	S	S	A set of sorts	A set of sorts
5	$\{X_s\}_{s \in \mathcal{S}}$	Family	Family X of s	a sort-indexed family of disjoint finite sets X_s of variables x of sort s
6	$[b/x] a$	Substitution	Substitute b for x in a	Substitute b for x in a
7	$x_1, \dots, x_n.a$	Abstractor	Bind variables x_n to expression a	Bind variables x_n to expression a
8	\vec{x}	X arrow	List of x s	x_1, \dots, x_n
8	$\rho : \vec{x} \leftrightarrow \vec{x}'$	Fresh renaming	Freshen x using renaming ρ	A bijection between \vec{x} and \vec{x}' where \vec{x}' is fresh.
8	$\hat{\rho}_i(a_i)$	Rho hat sub i	Rename result	The result of applying the renaming ρ_i to a_i
8	$x =_\alpha y$	Equal alpha	α -equivalence	Trees x and y equal up to renaming
9	$x \stackrel{\Delta}{=} y$	Delta equals	Replacement	Replace expression x with expression y
13	τ type	Type	Type τ	Judgement that τ is a type
13	$e : \tau$	Colon	e is of type τ	Judgement that expression e is of type τ
13	$e \Downarrow v$	Down arrow	e has value v	Judgement that expression e has value v
14	$\frac{J_1 \dots J_k}{J}$	Surfboard	Infers	Judgements $J_1 \dots J_k$ infer judgement J
23	$J_1 \dots J_k \vdash_{\mathcal{R}} \mathcal{K}$	Turnstile	Entails	Given \mathcal{R} and J infer \mathcal{K}
23	Γ	Gamma	Judgements Gamma	A finite set of judgements
23	Δ	Delta	Judgements Delta	A finite set of judgements
25	$\Gamma \vdash_R J$	Double turnstile	Admissible	$\vdash_R \Gamma$ implies $\vdash_R J$
28	∇	Down triangle	Generic derivation	Generic derivation
41	$s \mapsto s'$	Bar arrow	Transistion	State s transitions to state s'
42	$s \mapsto^* s'$	Bar arrow star	Iterated transistion	State s transitions to state s' over more than zero transitions
42	$s \mapsto^n s'$	Bar arrow n	N times iterated transistion	State s transitions to state s' over n transitions
44	\mathcal{E}	Script E	Expression context	Expression context
45	\circ	Circle	Hole	Placeholder to put an instruction
46	$e \equiv e'$	Equivalent	Definitional equivalence	e is definitionally equivalent to e'
58	$e??$	Wrong	E goes wrong	Expression e goes wrong
58	$e \Downarrow^k v$	Downarrow k	E evaluates in k steps	Expression e evaluates to v in k steps
166	\perp	Bottom	Bottom	Totally undefined partial function