Chapter 1

Expression	Name	Say	Meaning
$\mathcal{P}$	Script P	Proposition	Something to be proved
$\mathcal{P}(a)$	Script P of a	Proposition about tree a	Something to be proved about abstract syntax tree a
$\mathcal{O}$	Script O	Operator	An operator that can be used in an AST
$\mathcal{O}(a)$	Script O of a	Operator of arity a	An operator of a given arity
$\mathcal{X}_s$	Script X sub s	Variable x of sort s	A variable x of sort s
$\{X_s\}_{s\in\mathcal{S}}$	Family	Set X of s	a sort-indexed family of disjoint finite sets X_s of variables x of sort s
$[b/x]\,a$	Substitution	Substitute b for x in a	Substitute b for x in a
$x_1, ..., x_n.a$	Abstractor	Bind variables x_n to expression a	Bind variables x_n to expression a
$\overrightarrow{x}$	X arrow	List of xs	$x_1, ..., x_n$
$\rho : \overrightarrow{x} \leftrightarrow \overrightarrow{x}'$	Fresh renaming	Freshen x in a renaming	A bijection between $\overrightarrow{x}$ and $\overrightarrow{x}'$ where $\overrightarrow{x}'$ is fresh for X .
$\widehat{\rho_i}(a_i)$	Rho hat sub i	Rename result	The result of applying the renaming ρ to a
$=_\alpha$	Equal alpha	$\alpha - equivalence$	Equal trees up to renaming
$\triangleq$			