

Modernized Algol*

Types

$\tau ::=$	nat	numbers
	$\tau \rightarrow \tau$	functions
	cmd	command

Expressions

$e ::=$	x	variables
	z	zero
	$s(e)$	successor
	rec $e \{z.e_0 \mid s(x) \text{ with } y.e_1\}$	recursion
	$\lambda x : \tau. e$	abstraction
	$e_0 (e_1)$	application
	cmd m	encapsulation

Commands

$m ::=$	ret e	return
	bnd $x \leftarrow e; m$	sequence
	dcl $a := e$ in m	new assignable
	@ a	fetch
	$a := e$	assign

⁰As presented in *Practical Foundations for Programming Languages* by Robert Harper.