LET

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Especificacion del lenguaje LET

LET	
Sintaxis Concreta	Sintaxis Abstracta
$Expression := Number$	(const-exp num)
$Expression := -(Expression, Expression)$	(diff-exp exp1 exp2)
$Expression := zero?(Expression)$	(zero?-exp exp1)
$Expression := if\ Expression\ then\ else\ Expression$	(if-exp exp1 exp2 exp3)
$Expression := Identifier$	(var-exp var)
$Expression := let\ Identifier = Expression\ in\ Expression$	(let-exp var exp1 body)

Interpretación de expresiones

(value-of (const-exp n) ρ) = (num-val n)

(value-of (var-exp var) ρ) = $\rho(var)$

(value-of (diff-exp $exp1$ $exp2$) ρ)
= (num-val (- ($expval \rightarrow num$ (value-of $exp1$ ρ)) ($expval \rightarrow num$ (value-of $exp2$ ρ))))

(value-of (zero?-exp $exp1$ $exp2$) ρ)
= (let ([$val1$ (value-of $exp1$ ρ)]) (value-of $exp3$ ρ) (value-of $exp3$))

(value-of (if-exp $exp1$ $exp2$ $exp2$) ρ)
=(if (epxval $\rightarrow$ $bool(value - of \text{exp1}\rho)$) (value-of $exp2$ ρ) (value-of $exp3$ ρ))

(value-of (let-exp var $exp1$ $body$) ρ)
= (let ([$val1$ (value-of $exp1$ ρ)]) (value-of $body$ [$var = val1$] ρ)