Ledgard Type Matching Rules

[**Note:** In each of the following rules, 'T' stands for "any one type" and 'ST' stands for "any one simple type" (i.e. integer or boolean).]

$\{ST\}(:=\ |\ :=:)\{ST\}; \Rightarrow \{void\}$

if $\{boolean\}$ then $\{void\}$ end if ; $\Rightarrow \{void\}$

if $\{boolean\}$ then $\{void\}$ else $\{void\}$ end if ; $\Rightarrow \{void\}$

while $\{boolean\}$ loop $\{void\}$ end loop ; $\Rightarrow \{void\}$

input $\{ST_1\}, \{ST_2\}, \ldots \{ST_n\}; \Rightarrow \{void\}$

output $\{ST_1\}, \{ST_2\}, \ldots \{ST_n\}; \Rightarrow \{void\}$

$\langle integer - literal\rangle \Rightarrow \{integer\}$

(true | false) $\Rightarrow \{boolean\}$

({ T }) $\Rightarrow \{T\}$

not $\{boolean\} \Rightarrow \{boolean\}$

{ array of $T\}[\{integer\}] \Rightarrow \{T\}$

$\{ST\}(==\ |\ <>)\{ST\} \Rightarrow \{boolean\}$

$\{integer\}(<\ |\ <=\ |\ >\ |\ >=)\{integer\} \Rightarrow \{boolean\}$

$\{integer\}(+|-|*|/)\{integer\} \Rightarrow \{integer\}$

$\{boolean\}$(and | or)$\{integer\} \Rightarrow \{boolean\}$

All other productions produce $\{void\}$