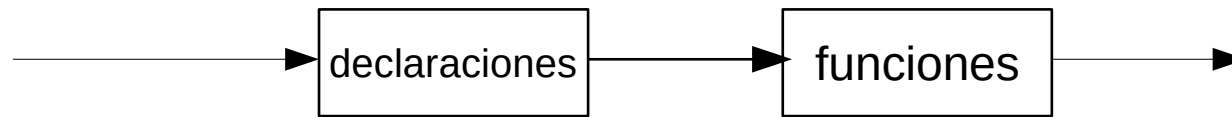
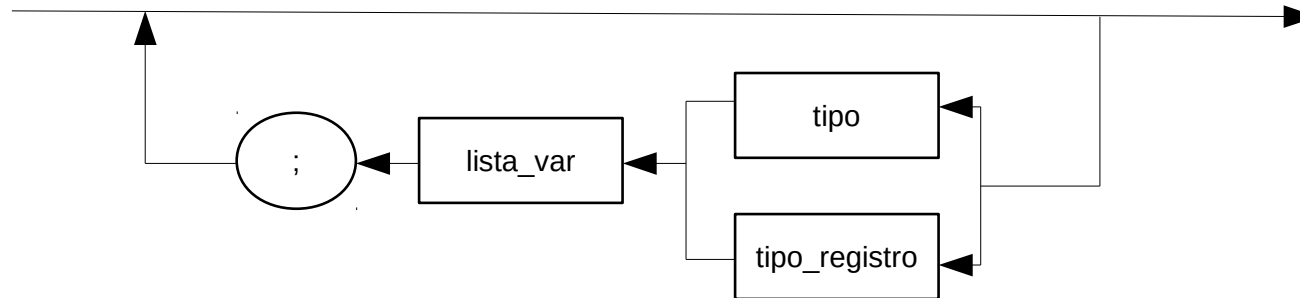


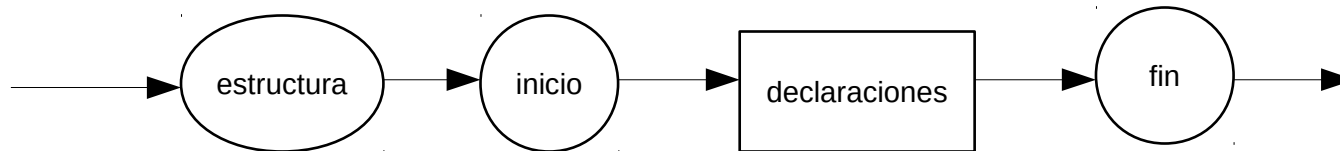
programa  $\rightarrow$  declaraciones funciones



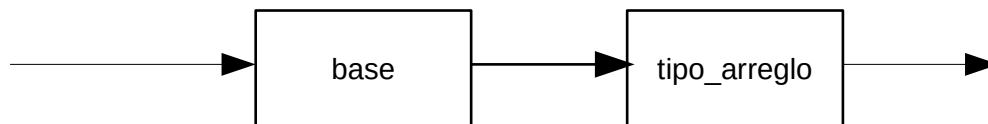
declaraciones  $\rightarrow$  { (tipo | tipo\_registro) lista\_var ; }



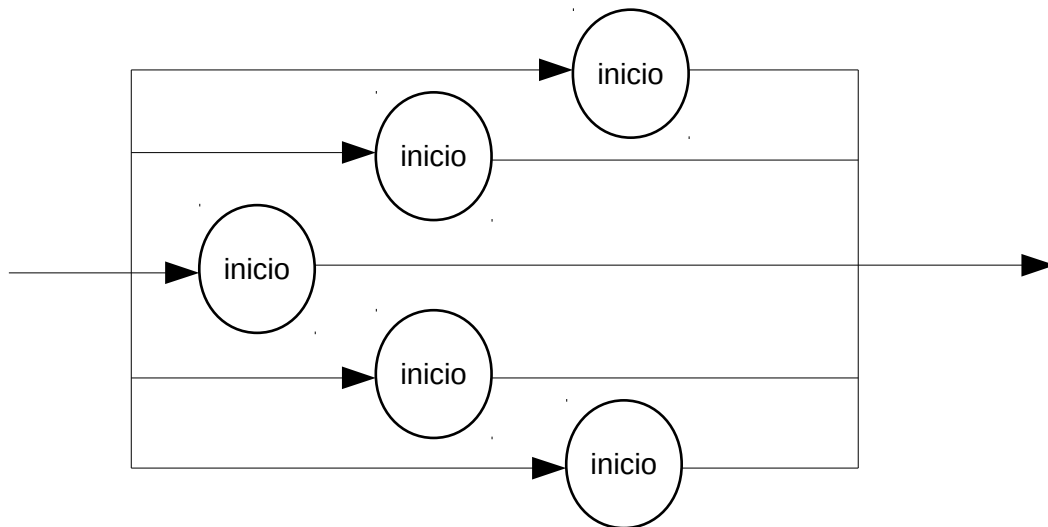
tipo\_registro  $\rightarrow$  estructura inicio declaraciones fin



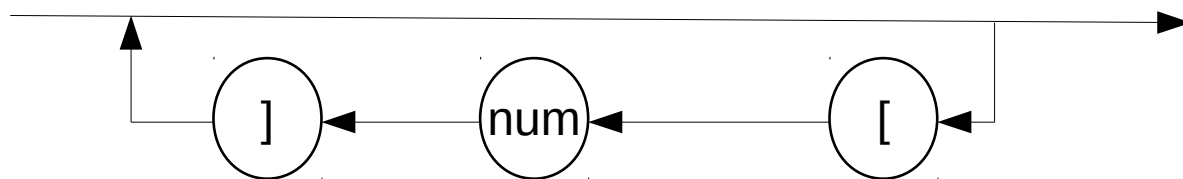
tipo  $\rightarrow$  base tipo\_arreglo



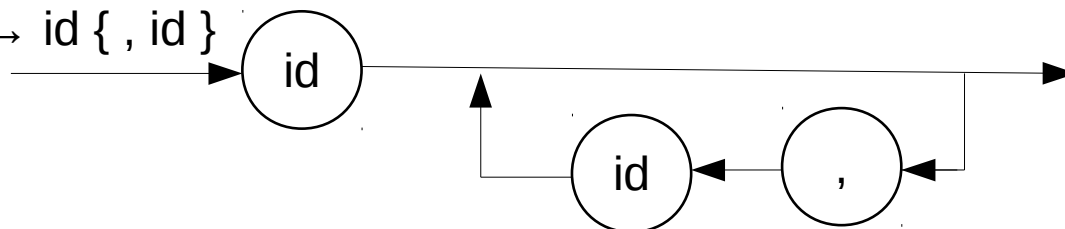
base  $\rightarrow$  ent | real | dreal | car | sin



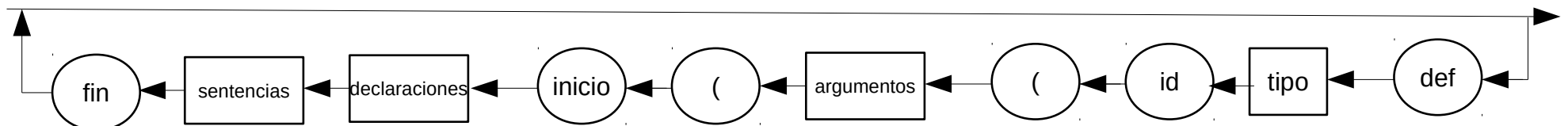
tipo\_arreglo  $\rightarrow$  { [ num ] }



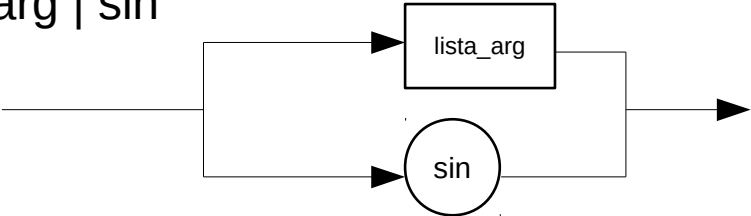
lista\_var  $\rightarrow$  id { , id }



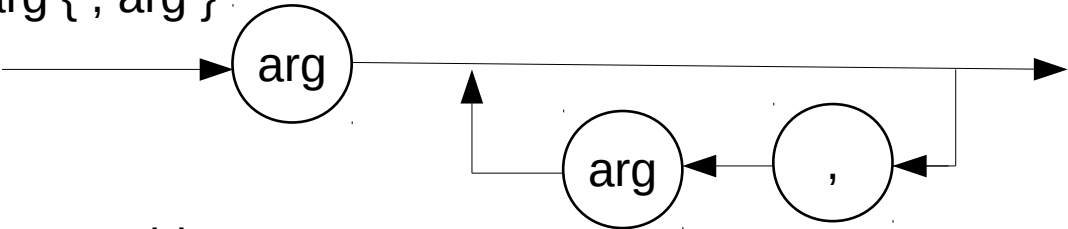
funciones  $\rightarrow$  { def tipo id ( argumentos ) inicio declaraciones sentencias fin }



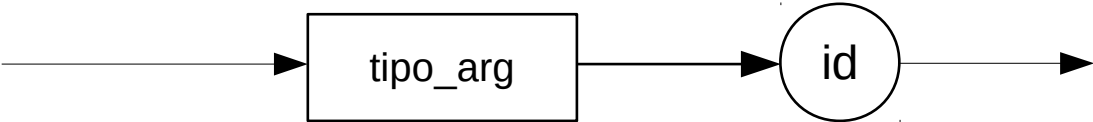
argumentos  $\rightarrow$  lista\_arg | sin



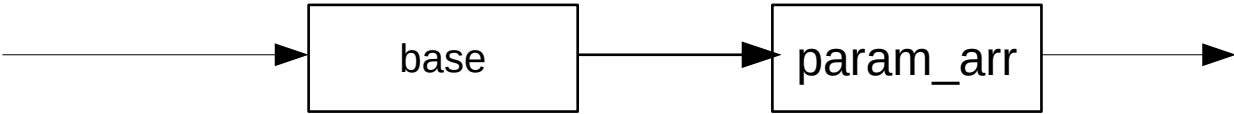
lista\_arg  $\rightarrow$  arg { , arg }



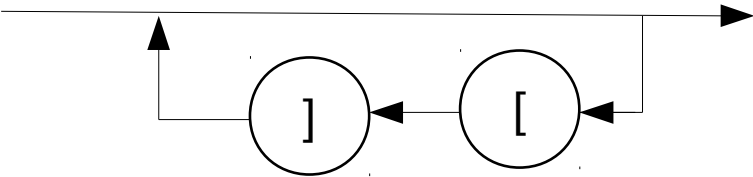
arg  $\rightarrow$  tipo\_arg id



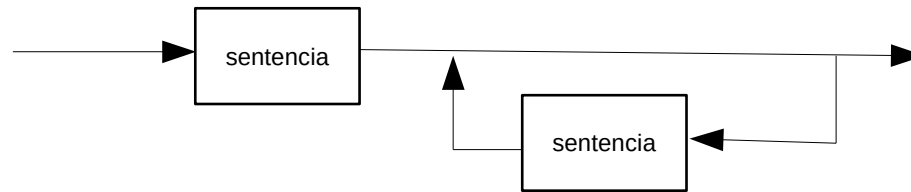
tipo\_arg  $\rightarrow$  base param\_arr



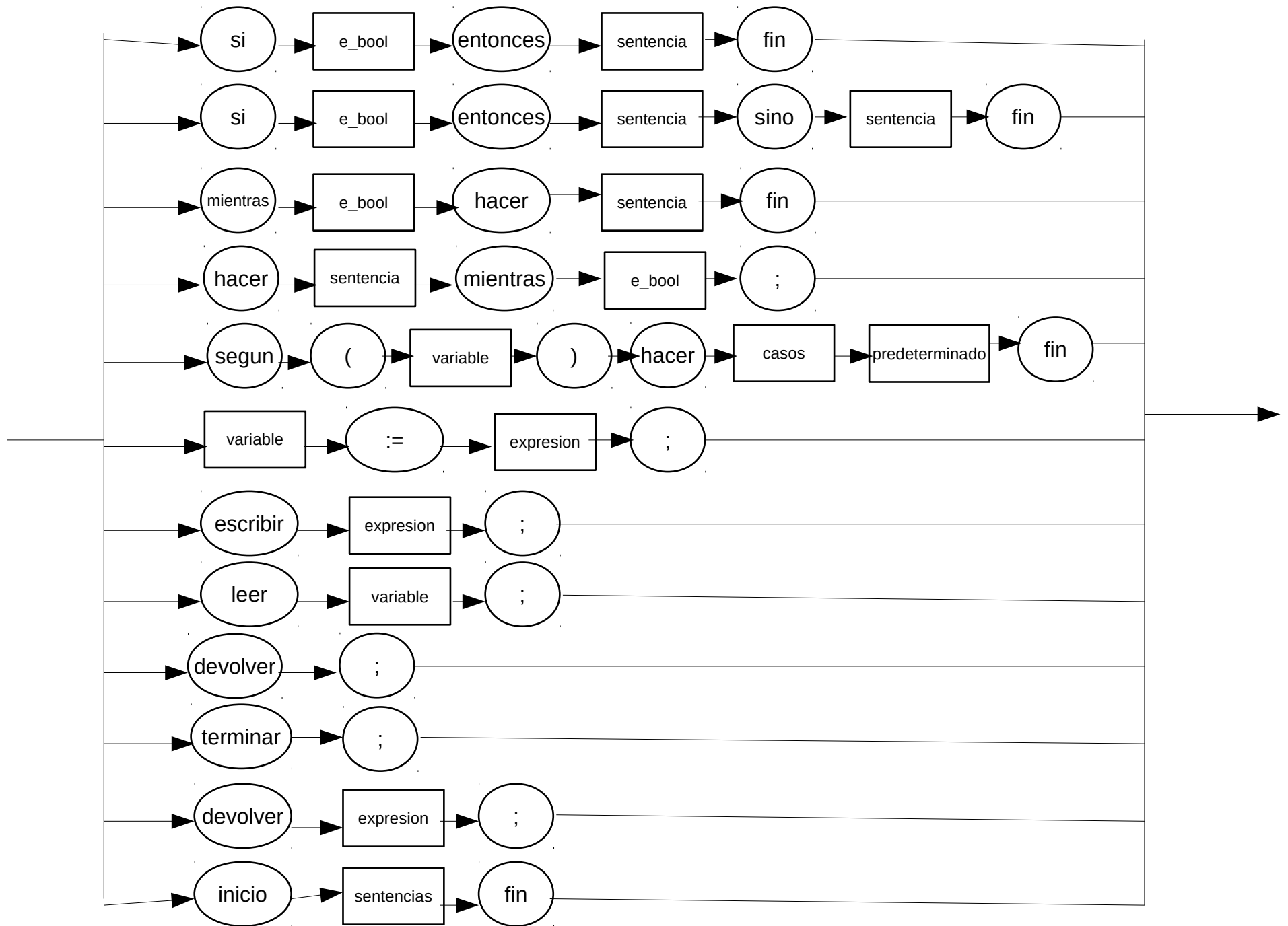
param\_arr  $\rightarrow$  { [ ] }



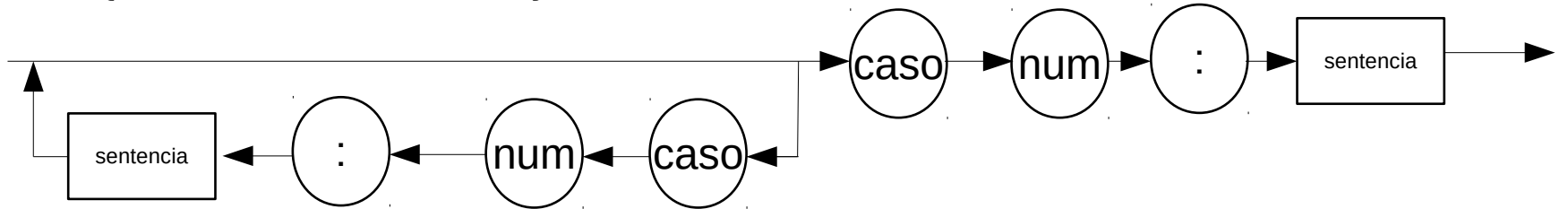
sentencias  $\rightarrow$  sentencia { sentencia }



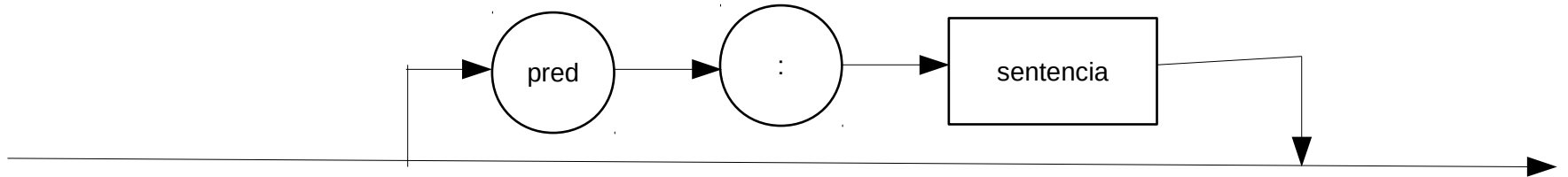
sentencia  $\rightarrow$  si e\_bool entonces sentencia fin  
| si e\_bool entonces sentencia sino sentencia fin  
| mientras e\_bool hacer sentencia fin  
| hacer sentencia mientras e\_bool ;  
| segun ( variable ) hacer casos predeterminado fin  
| variable := expresion ;  
| escribir expresion ;  
| leer variable ;  
| devolver ;  
| devolver expresion ;  
| terminar ;  
| inicio sentencias fin



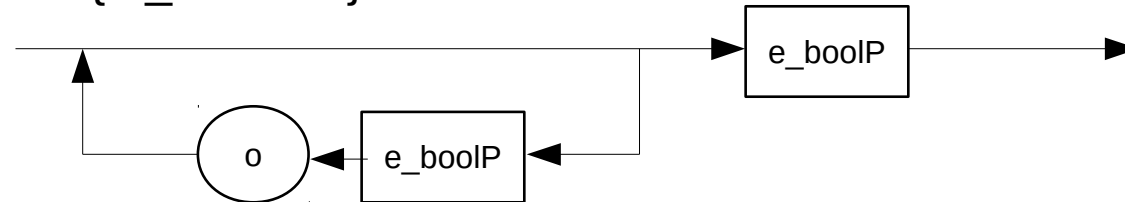
casos  $\rightarrow \{ \text{caso num: sentencia} \} \text{ caso num: sentencia}$



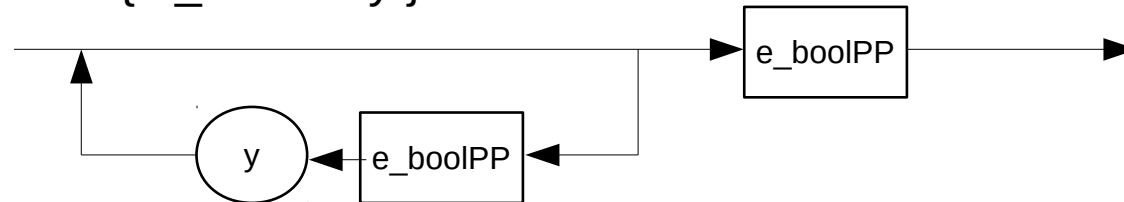
predeterminado  $\rightarrow \text{pred : sentencia}$



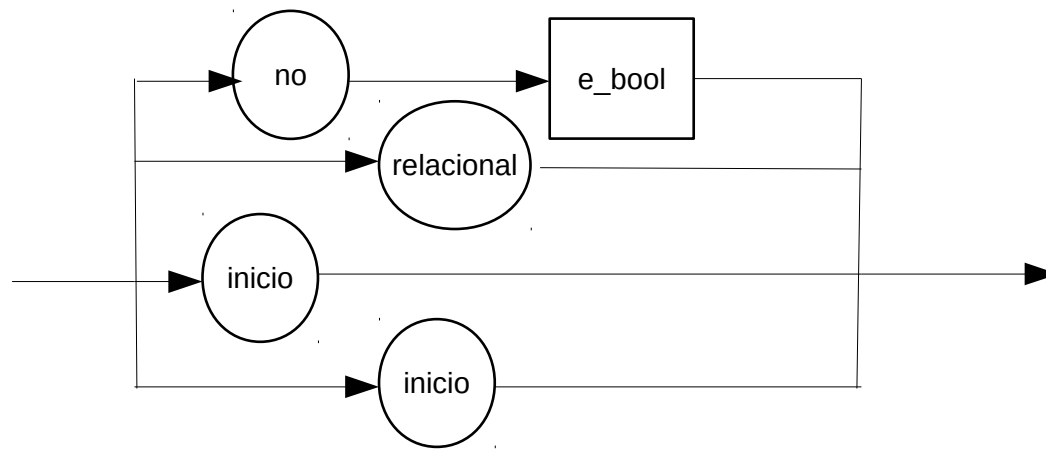
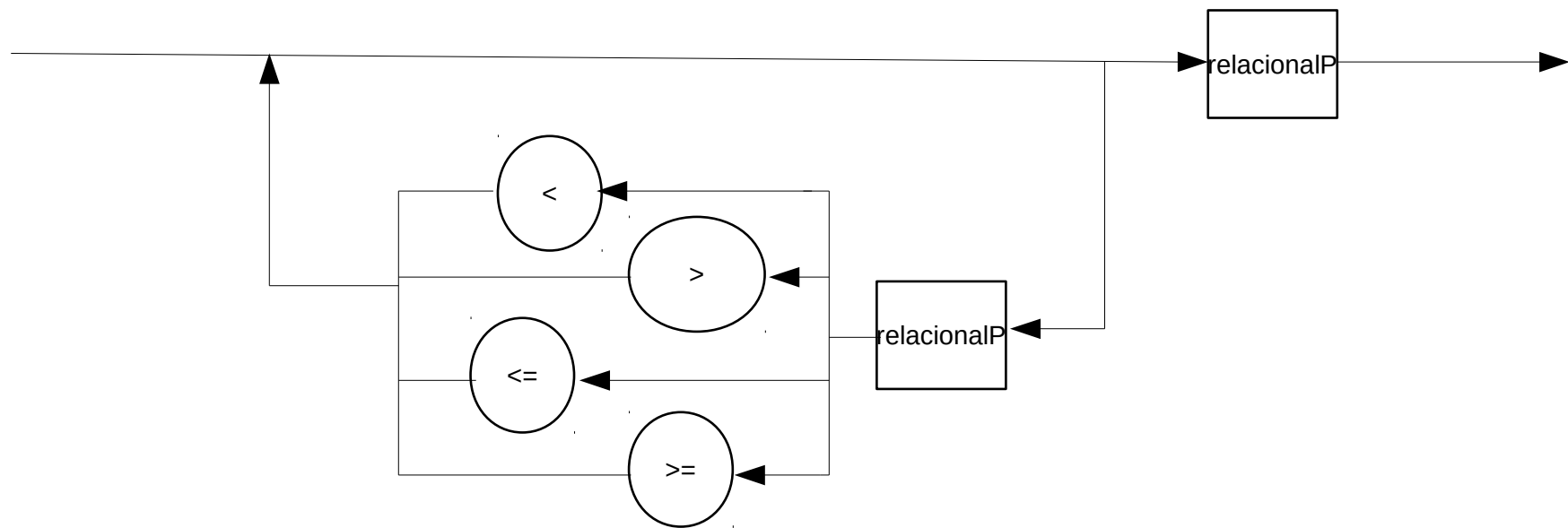
e\_bool  $\rightarrow \{ \text{e\_boolP o} \} \text{eboolP}$



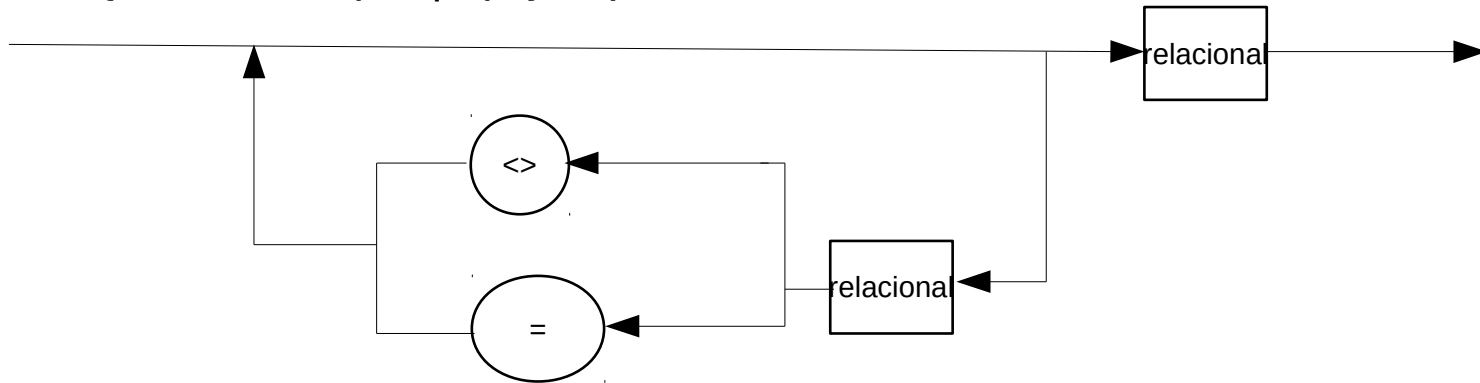
e\_boolP  $\rightarrow \{ \text{e\_boolPP y} \} \text{eboolPP}$



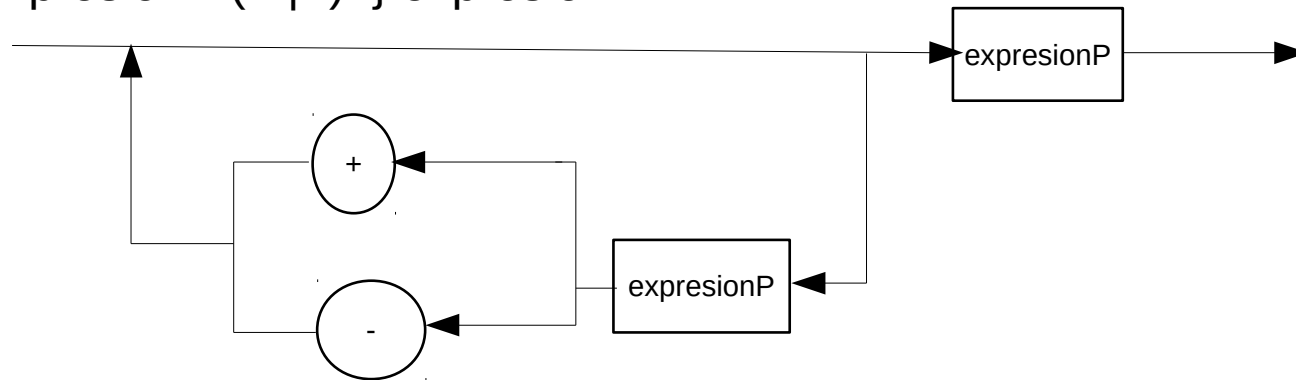
e\_boolPP  $\rightarrow$  no ebool | relacional | verdadero | falso


$$\text{relacional} \rightarrow \{ \text{relacionalP } ( < \mid > \mid \leq \mid \geq ) \} \text{relacionalP}$$


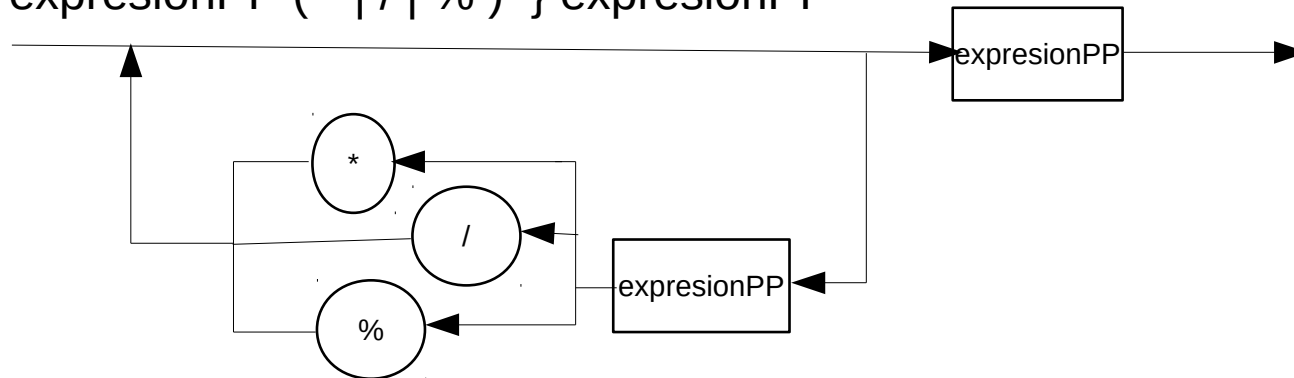
relacionalP  $\rightarrow \{ \text{relacional} (<> | =) \} \text{expresion}$



expresion  $\rightarrow \{ \text{expresionP} (+ | -) \} \text{expresionP}$

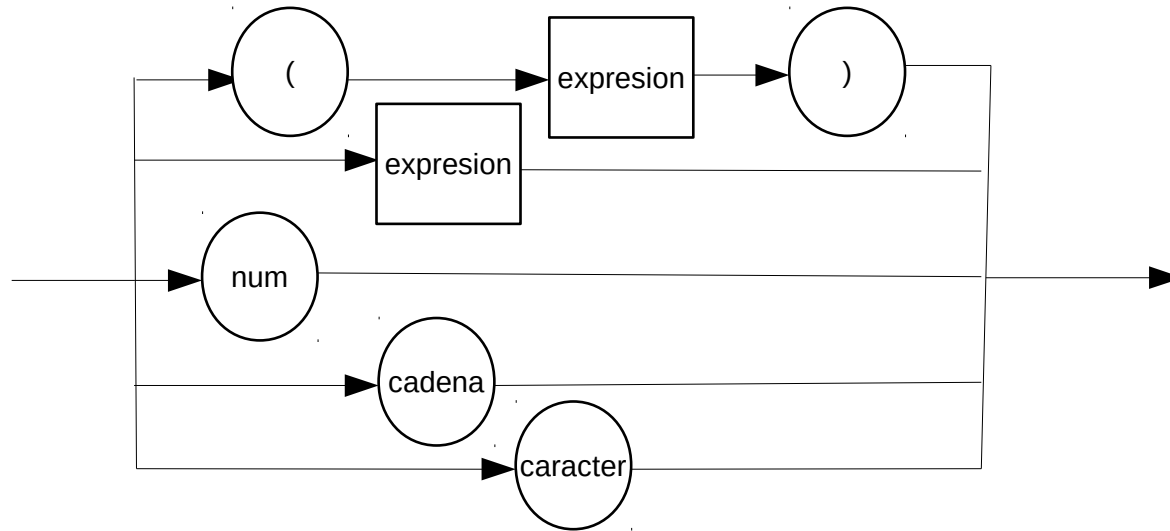


expresionP  $\rightarrow \{ \text{expresionPP} (* | / | \%) \} \text{expresionPP}$

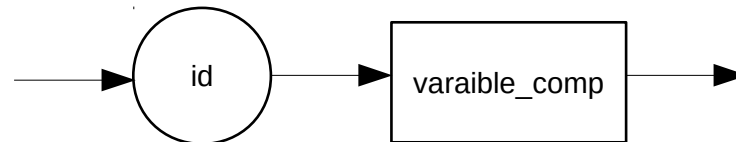




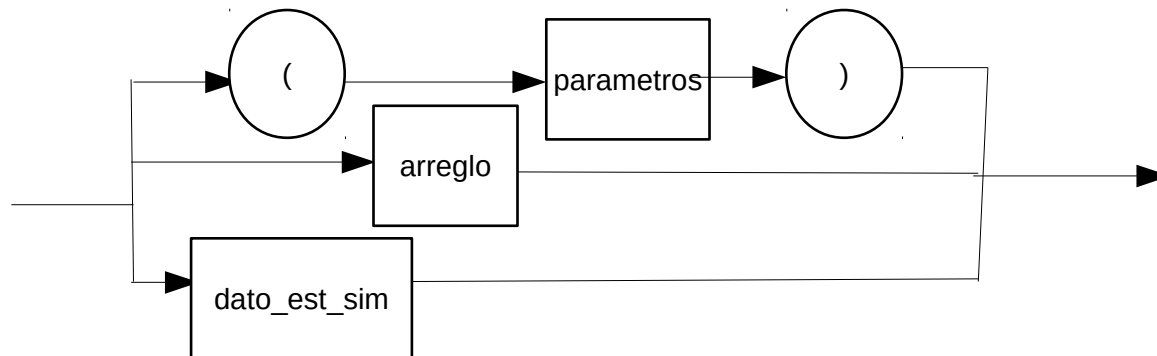
expresionPP  $\rightarrow$  (expresion) | variable | num | cadena | caracter



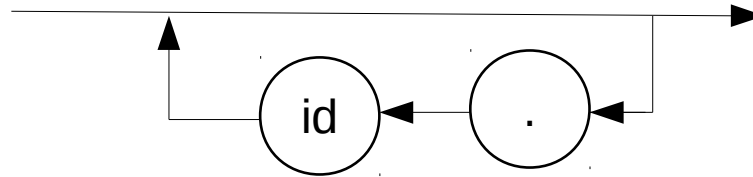
variable  $\rightarrow$  id variable\_comp



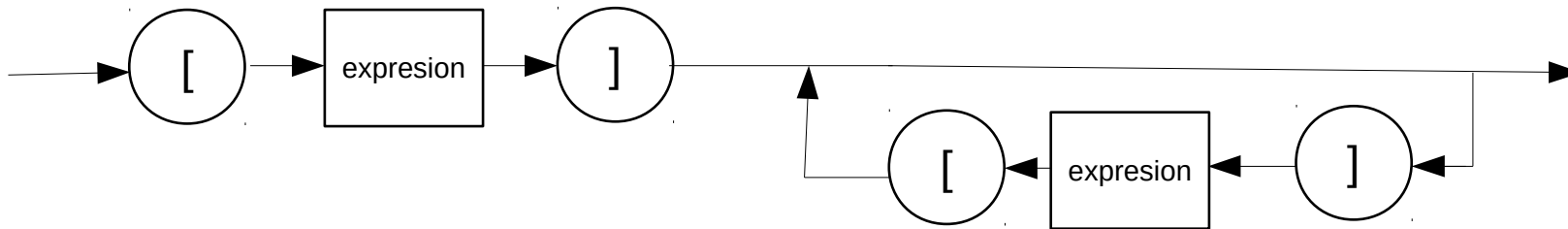
variable\_comp  $\rightarrow$  dato\_est\_sim | arreglo | ( parametros )



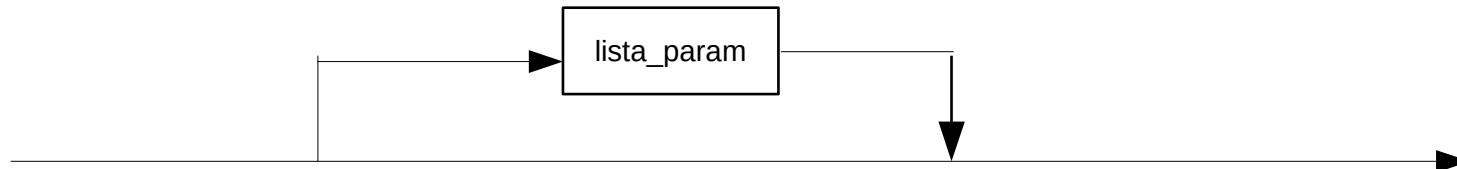
dato\_est\_sim  $\rightarrow$  { . id }



arreglo  $\rightarrow$  [expresion] { [ expresion ] }



parametros  $\rightarrow$  lista\_param



arreglo  $\rightarrow$  [expresion] { , expresion }

