

PROGRAM -> STATEMENT  
PROGRAM -> FUNCLIST  
PROGRAM ->  $\epsilon$

FUNCLIST -> FUNCDEF FUNCLIST  
FUNCLIST -> FUNCDEF

FUNCDEF -> **def ident**(PARAMLIST){STATELIST}

PARAMLIST -> **int ident**, PARAMLIST  
PARAMLIST -> **float ident**, PARAMLIST  
PARAMLIST -> **string ident**, PARAMLIST  
PARAMLIST -> **int ident**  
PARAMLIST -> **float ident**  
PARAMLIST -> **string ident**  
PARAMLIST ->  $\epsilon$

STATEMENT -> VARDECL;  
STATEMENT -> ATRIBSTAT;  
STATEMENT -> PRINTSTAT;  
STATEMENT -> READSTAT;  
STATEMENT -> RETURNSTAT;  
STATEMENT -> IFSTAT  
STATEMENT -> FORSTAT  
STATEMENT -> {STATELIST}  
STATEMENT -> **break**;  
STATEMENT -> ;

VARDECL -> **int ident** VARDECLAUX  
VARDECL -> **float ident** VARDECLAUX  
VARDECL -> **string ident** VARDECLAUX  
VARDECL -> **tint ident** VARDECLAUX  
VARDECL -> **tfloat ident** VARDECLAUX  
VARDECL -> **tstring ident** VARDECLAUX  
VARDECLAUX -> [**int\_constant**]  
VARDECLAUX -> [**int\_constant**]VARDECLAUX  
VARDECLAUX -> [**int\_constant**]  
VARDECLAUX ->  $\epsilon$

ATRIBSTAT -> LVALUE = EXPRESSION  
ATRIBSTAT -> LVALUE = ALOCEXPRESSION  
ATRIBSTAT -> LVALUE = FUNCCALL

FUNCCAL -> **ident**(PARAMLISTCALL)

PARAMLISTCALL -> **ident**, PARAMLISTCALL  
PARAMLISTCALL -> **ident**

PARAMLISTCALL ->  $\epsilon$

PRINTSTAT -> **print** EXPRESSION

READSTAT -> **read** LVALUE

RETURNSTAT -> **return** ident

IFSTAT -> **if**( EXPRESSION ) STATEMENT **else** STATEMENT

IFSTAT -> **if**( EXPRESSION ) STATEMENT

FORSTAT -> **for**(ATRIBSTAT; EXPRESSION; ATRIBSTAT ) STATEMENT

STATELIST -> STATEMENT STATELIST

STATELIST -> STATEMENT

ALLOCEXPRESSION -> **new int** [NUMEXPRESSION]ALLOCEXPRESSIONAUX

ALLOCEXPRESSION -> **new float** [NUMEXPRESSION]ALLOCEXPRESSIONAUX

ALLOCEXPRESSION -> **new string** [NUMEXPRESSION]ALLOCEXPRESSIONAUX

ALLOCEXPRESSIONAUX -> [NUMEXPRESSION]ALLOCEXPRESSIONAUX

ALLOCEXPRESSIONAUX ->  $\epsilon$

EXPRESSION -> LOGEXPRESSION

EXPRESSION -> LOGEXPRESSION < LOGEXPRESSION

EXPRESSION -> LOGEXPRESSION > LOGEXPRESSION

EXPRESSION -> LOGEXPRESSION <= LOGEXPRESSION

EXPRESSION -> LOGEXPRESSION >= LOGEXPRESSION

EXPRESSION -> LOGEXPRESSION == LOGEXPRESSION

EXPRESSION -> LOGEXPRESSION != LOGEXPRESSION

LOGEXPRESSION -> **not** LOGEXPRESSION

LOGEXPRESSION -> LOGEXPRESSION\_AND

LOGEXPRESSION -> NUMEXPRESSION

LOGEXPRESSION\_AND -> LOGEXPRESSION **and** LOGEXPRESSION

LOGEXPRESSION\_AND -> LOGEXPRESSION\_OR

LOGEXPRESSION\_OR -> LOGEXPRESSION **or** LOGEXPRESSION

LOGEXPRESSION\_OR -> (EXPRESSION)

NUMEXPRESSION -> TERM NUMEXPRESSIONAUX

NUMEXPRESSIONAUX -> + TERM NUMEXPRESSIONAUX

NUMEXPRESSIONAUX -> - TERM NUMEXPRESSIONAUX

NUMEXPRESSIONAUX ->  $\epsilon$

TERM -> UNARYEXPR TERMAUX

TERMAUX -> \* UNARYEXPR TERMAUX]

TERMAUX -> / UNARYEXPR TERMAUX

TERMAUX -> % UNARYEXPR TERMAUX  
TERMAUX ->  $\epsilon$

UNARYEXPR -> FACTOR  
UNARYEXPR -> + FACTOR  
UNARYEXPR -> - FACTOR

FACTOR -> int\_constant  
FACTOR -> float\_constant  
FACTOR -> string\_constant  
FACTOR -> null  
FACTOR -> LVALUE  
FACTOR -> (NUMEXPRESSION)

LVALUE-> ident LVALUEAUX  
LVALUEAUX -> [NUMEXPRESSION] LVALUEAUX  
LVALUEAUX ->  $\epsilon$