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Program → Functions

Functions → Function Functions | EPSILON

Function → FUNCTION IDENT SEMICOLON BEGINPARAMS Declarations
ENDPARAMS BEGINLOCALS Declarations ENDLOCALS BEGINBODY Statement
ENDBODY

Declarations → Declaration SEMICOLON Declarations
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Declaration → Identifiers COLON INTEGER
| Identifiers COLON ARRAY L_SQUARE_BRACKET NUMBER R_SQUARE_BRACKET
OF INTEGER

Identifiers → IDENT
| IDENT COMMA Identifiers

Statement → Var ASSIGN Expression
| IF Bool-Expr THEN Statements ENDIF
| IF Bool-Expr THEN Statements ELSE Statements ENDIF
| WHILE Bool-Expr BEGINLOOP Statements ENDLOOP
| DO BEGINLOOP Statements ENDLOOP WHILE Bool-Expr
| READ Vars
| WRITE Vars
| CONTINUE
| RETURN Expression

Statements → Statement SEMICOLON Statements
| Statement SEMICOLON

Vars → Var COMMA Vars
| Var

Bool-Expr → Relation-Expr
| Bool-Expr OR Relation-Expr

Relation-Exprs → Relation-Expr
| Relation-Exprs AND Relation-Expr

Relation-Expr → NOT Expression Comp Expression
| Expression Comp Expression
| TRUE
| FALSE
| L_PAREN Bool-Expr R_PAREN

Comp → EQ
| NEQ
| LT
| GT
| LTE
| GTE

Expression → Multiplicative-Expr MultExprOp

MultExprOp → ADD Expression
| SUB Expression
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Multiplicative-Expr → Term MULT Multiplicative-Expr
| Term DIV Multiplicative-Expr
| Term MOD Multiplicative-Expr
| Term

Term → SUB Var
| Var
| SUB NUMBER
| NUMBER
| L_PAREN Expression R_PAREN
| IDENT L_PAREN Expression Expressions R_PAREN

Expressions → COMMA Expression Expressions
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Var → IDEN
| IDEN L_SQUARE_BRACKET Expression R_SQUARE_BRACKET