1. *program* -> program id (idlst); declarations subdeclarations cmpdstmnt

2.1 *idlst* -> id

2.2 *idlst* -> idlst, id

3.1 declarations -> declarations var idlst: type ;

3.2 declarations -> e

4.1 type -> standard\_type

4.2 type -> array [num .. num] of standard\_type

5.1 standard\_type -> integer

5.2 standard\_type -> real

6.1 subdeclarations -> subdeclarations subdeclaration ;

6.2 subdeclarations -> e

7 subdeclaration -> subprog\_head declarations cmpdstmnt

8.1 subprogram\_head -> function id arguments : standard\_type ;

8.2 subprogram\_head -> procedure id arguments ;

9.1 arguments -> (parameter\_list )

9.2 arguments -> e

10.1 parameter\_list -> identifier\_list : type

10.2 parameter\_list -> parameter\_list ; id : type

11 compound statement -> begin optional\_statements end

12.1 optional\_statements -> statement\_list

12.1 optional\_statements -> statement\_list ; statement

13.1 statement -> variable assignop expression

13.2 statement -> procedure\_statement

13.3 statement -> compound\_statement

13.4 statement -> if expression then statement else statement

13.5 statement -> while expression do statement

14.1 variable -> id

14.2 variable -> id [expression]

15.1 procedure\_statement -> id

15.2 procedure\_statement -> id (expression\_list )

16.1 expression\_list -> expression

16.2 expression\_list -> expression\_list, expression

17.1 expression -> simple\_expression

17.2 expression -> simple\_expression relop simple\_expression

18.1 simple\_expression -> term

18.2 simple\_expression -> sign term

18.1 simple\_expression -> simple\_expression addop term

19.1 term -> factor

19.2 term -> term mulop factor

20.1 factor -> id

20.2 factor -> id ( expression\_list )

20.3 factor -> num

20.4 factor -> ( expression )

20.5 factor -> not factor

21.1 sign -> +

21.2 sign -> -