```
1.
                                                program id ( identifier_list );
                             program
                                                declarations'
                                                subprogram\_declarations'
                                                compound\_statement
2.1.
                       identifier\_list
                                                id identifier_list'
2.2.1.
                       identifier\_list'
                                                , id identifier_list'
                                        \rightarrow
2.2.2.
                       identifier\_list'
3.1.
                         declarations
                                                var id: type; declarations'
3.2.1.
                        declarations'
                                                var id: type; declarations'
3.2.2.
                        declarations'
4.1.
                                 type
                                                standard\_type
4.2.
                                                array [ num .. num ] of standard_type
                                 type
5.1.
                       standard\_type
                                                integer
5.2.
                                                real
                       standard\_type
6.1.
            subprogram\_declarations
                                                subprogram_declaration ; subprogram_declarations'
6.2.1.
           subprogram\_declarations'
                                                subprogram\_declaration; subprogram\_declarations'
6.2.2.
           subprogram\_declarations'
7.
             subprogram\_declaration
                                        \rightarrow
                                                subprogram_head declarations'
                                                subprogram\_declarations' compound\_statement
8.
                    subprogram\_head
                                                procedure id arguments;
9.1.
                          arguments
                                                ( parameter_list )
9.2.
                          arguments
10.1.
                      parameter\_list
                                                id: type parameter_list'
10.2.1.
                      parameter_list'
                                                ; id : type parameter_list'
10.2.2.
                      parameter_list'
11.
                compound\_statement
                                                begin
                                                optional\_statements
                                                end
12.1.
                optional\_statements
                                                statement list
12.2.
                optional\_statements
13.1.
                       statement\_list
                                                statement\ statement\_list'
13.2.1.
                      statement\_list'
                                                ; statement statement_list'
13.2.2.
                      statement\_list'
14.1.
                           statement
                                                variable assignop expression
14.2.
                           statement
                                                procedure\_statement
14.3.
                           statement
                                                compound\_statement
14.4.
                           statement
                                                while expression do statement
14.5.
                           statement
                                                if expression then statement else'
15.1.
                                 else'
                                                else statement
15.2.
                                 else'
                                        \rightarrow
16.
                             variable
                                                id array\_access
17.1.
                        array\_access
                                                id [ expression ]
17.2.
                        array\_access
18.
                                                call id optional_expressions
                procedure\_statement
19.1.
                optional\_expressions
                                                ( expression_list )
19.2.
                optional\_expressions
20.1.
                      expression\_list
                                                expression\ expression\_list'
                                                , expression\ expression\_list'
20.2.1.
                      expression\_list'
                      expression\_list'
20.2.2.
21.1.
                          expression
                                                simple\_expression
21.2.
                          expression
                                                simple_expression relop simple_expression
23.1.
                  related\_expression
                                                {\bf relop} \ simple\_expression
23.2.
                  related\_expression
23.1.
                   simple\_expression
                                                term simple_expression'
```

23.2.	$simple\_expression$	$\rightarrow$	$sign\ term\ simple\_expression'$
23.3.1.	$simple\_expression'$	$\rightarrow$	addop term simple_expression'
23.3.2.	$simple\_expression'$	$\rightarrow$	$\epsilon$
24.1.	term	$\rightarrow$	$factor\ term'$
24.2.1.	term'	$\rightarrow$	mulop factor term'
24.2.2.	term'	$\rightarrow$	$\epsilon$
25.1.	factor	$\rightarrow$	variable
25.2.	factor	$\rightarrow$	num
25.3.	factor	$\rightarrow$	( expression )
25.4.	factor	$\rightarrow$	${f not}\ factor$
26.1.	sign	$\rightarrow$	+
26.2.	sign	$\rightarrow$	_