```
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'
2.2.2.
                       identifier\_list'
3.1.
                        declarations
                                               var id: type; declarations
3.2.
                        declarations
4.1.
                                 type
                                               standard\_type
4.2.
                                               array [ num .. num ] of standard_type
                                 type
5.1.
                       standard\_type
                                               integer
5.2.
                      standard\_type
                                               real
                                               subprogram_declaration ; subprogram_declarations
6.1.
            subprogram\_declarations
6.2.
            subprogram\_declarations
7.
             subprogram\_declaration
                                               subprogram\_head\ declarations
                                               subprogram\_declarations\ compound\_statement
8.
                   subprogram\_head
                                               procedure id arguments;
9.1.
                                               ( parameter_list )
                          arguments
9.2.
                          arguments
                                               id : type parameter_list'
10.1.
                      parameter\_list
10.2.1.
                                               ; id : type parameter_list'
                      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'
16.
                            variable
                                               id array_access
17.1.
                                               [ expression ]
                        array\_access
17.2.
                        array\_access
18.
                procedure\_statement
                                               call id optional_expressions
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'
20.2.2.
                      expression\_list'
21.
                          expression
                                               simple\_expression related\_expression
22.1.
                  related\_expression
                                               relop simple_expression
22.2.
                  related\_expression
23.1.
                  simple\_expression
                                               term simple_expression'
23.2.
                  simple\_expression
                                               sign term simple_expression'
23.3.1.
                  simple\_expression'
                                               addop term simple_expression'
23.3.2.
                  simple\_expression'
```

| 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.   | $sign \rightarrow$   | _                  |
|         |                      |                    |