

$Program \rightarrow \mathbf{begin} \textit{Statements} \mathbf{end}$

$Statements \xrightarrow{\epsilon} \textit{Statements} \textit{Statement}$

$\textit{IfThenElseStatement}$

$\textit{DoWhileStatement}$

$\textit{Statement} \rightarrow \textit{PrintStatement}$

$\textit{DeclarationStatement}$

$\textit{AssignmentStatement}$

$\textit{IfThenElseStatement} \rightarrow \textit{IfThen} \textit{MaybeElse}$

$\textit{IfThen} \rightarrow \mathbf{if} \textit{Expression} \mathbf{then} \{ \textit{Statements} \}$

$\textit{MaybeElse} \xrightarrow{\epsilon} \mathbf{else} \{ \textit{Statements} \}$

$\textit{DoWhileStatement} \rightarrow \mathbf{do} \{ \textit{Statements} \} \mathbf{while} (\textit{Expression}) ;$

$\textit{PrintStatement} \rightarrow \mathbf{print} (\textit{Expression}) ;$

$\textit{DeclarationStatement} \rightarrow \textit{TypeSpecifier} \textit{InitDeclarator} ;$

$\textit{TypeSpecifier} \rightarrow \mathbf{int}$
 \mathbf{bool}

$\textit{AssignmentStatement} \rightarrow \mathbf{Identifier} = \textit{Expression} ;$

$\textit{InitDeclarator} \rightarrow \mathbf{Identifier}$
 $\mathbf{Identifier} = \textit{Expression}$

$\textit{Expression} \rightarrow \textit{EqualityExpression}$

$\textit{EqualityExpression} \xrightarrow{\textit{RelationalExpression}} \textit{EqualityExpression} == \textit{RelationalExpression}$

$\textit{AdditiveExpression}$

$\textit{RelationalExpression} \rightarrow \textit{RelationalExpression} > \textit{AdditiveExpression}$

$\textit{RelationalExpression} >= \textit{AdditiveExpression}$

$\textit{MultiplicativeExpression}$

$\textit{AdditiveExpression} \rightarrow \textit{AdditiveExpression} + \textit{MultiplicativeExpression}$

$\textit{PrimaryExpression}$

$\textit{MultiplicativeExpression} \rightarrow \textit{MultiplicativeExpression} * \textit{PrimaryExpression}$

Identifier

PrimaryExpression \rightarrow *Literal*
(*Expression*)

Number

Literal \rightarrow **true**
false