BNF and interpreter rules

**Maximum length allowed for calculation:** 50.

**Overflow handling:** showing error message on screen.

**Maximum length allowed for program code:** 30.

**Overflow handing:** executing only the first 30 code lines.

**Maximum variable names length:** 3.

**Overflow handling:** showing error message on screen.

Variables must contain letters only.

Only 5 variables are allowed in 1 program.

**Tokens:**

<numbers> :: number | numbers number

<number> :: digits | +digits | -digits

<digits> :: digit | digits digit0 | digits digit

<digit> :: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

<digit0> :: 0

**Boolean expressions:**

<Boolean expressions>: bigger than sign | smaller than sign | equal sign

<bigger than sign> :: <

<smaller than sign> :: >

<equal sign> :: ==

**Arithmetic expressions:**

<arithmetic expression> :: <addition sign> | <subtraction sign> | <multiplication sign> | <division sign>

<addition sign> :: -

<subtraction sign> :: +

<multiplication sign> :: /

<division sign> :: \*

**Blocks and commands:**

<program> ::= <statements>

<while\_loop> ::= "while" <boolean\_expression> ":" <statements>

<statements> ::= <statement> | <statements> <statement>

<statement> :: = <assignment> | <arithmetic> | <if\_statement> | <print\_statement> | <while\_loop>

<assignment> ::= <variable> "=" <expression>

<arithmetic> ::= <variable> "=" <expression> <arithmetic\_expression>

<if\_statement> ::= "if" <boolean\_expression> ":" <statements> <elif\_statement>

<elif\_statement> ::= "elif" <boolean\_expression> ":" <statements>

<print\_statement> ::= "print" "(" <expression> ")"

<expression> ::= <term> | <expression> <term>

<term> ::= <variable> | <number>

<variable> ::= <numbers>