Grammars for Arithmetic and Boolean Expressions

Question: Provide the grammar for arithmetic expressions involving + - * / and parentheses.

Answer: The grammar is show as below:

```
expression    →   expression + term | expression - term | term
term          →   term * factor | term / factor | factor
factor        →   identifier | constant | ( expression) | - factor | + factor
```

Question: Provide the grammar for Boolean expressions involving AND OR NOT and parentheses.

Answer: The grammar is show as below:

```
boolean-expression    →    boolean-expression OR boolean-factor | boolean-factor
boolean-factor        →    boolean-factor AND boolean-secondary | boolean-secondary
boolean-secondary     →    NOT boolean-primary | boolean-primary
boolean-primary       →    arithmetic-expression = arithmetic-expression
                           | arithmetic-expression <> arithmetic-expression
                           | arithmetic-expression > arithmetic-expression
                           | arithmetic-expression >= arithmetic-expression
                           | arithmetic-expression < arithmetic-expression
                           | arithmetic-expression <= arithmetic-expression
                           | ( boolean-expression )
```