## BNF - Compiladores - FIPP 2013

```
<comeco> -> <decl><subs><prog_princ>
<comeco> -> <subs><prog princ>
<comeco> -> <prog princ>
<decl>-> var <varias_decl>
<decl> -> &
<varias decl> -> <tipos bas> <lista id> ;<vdl>
<vdl> -> <varias_decl>
<vdl> -> &
<tipos bas> -> inteiro
<tipos bas> -> real
<tipos_bas> -> letra
dista_id>-> <tipos_id> li></ti>
> -> , sta id>
<|i|> -> &
<tipos_id> -> id<til>
<til> -> &
<til> -> [num int]
<subs> -> # nomeSub inicio <bloco_cmd> fim <subs>
<subs> -> &
//<bloco cmd> -> <varios cmd>
<varios_cmd> -> <um_cmd> ; <varios_cmd>
<varios_cmd> -> &
<um cmd> -> <cmd if>
<um_cmd> -> <cmd_while>
<um_cmd> -> <cmd_escreva>
<um cmd> -> <cmd ler>
<um_cmd> -> <cmd_atrib>
<um_cmd> -> <cmd_cham_sub>
<md_cham_sub> -> nomeSub
<md ler> -> leias(id)
<md_escrever> -> exibas(<vex>
<vex> -> id)
<vex> -> literal)
<md_atrib> -> <tipos_id> recebas <expre_arit>
<expre_arit> -> literal
<expre_arit> -> <contas>
<contas> -> (<contas>) <nontas>
```

```
<contas> -> <termo> <nontas>
<nontas> -> <op aritm><termo><nontas>
<nontas> -> &
******* trecho alternativo?
<contas> -> (<contas>)
<contas> -> <termo><nontas>
<nontas> -> <op aritm><contas>
<nontas> -> &
**********
<termo> -> <tipos_id>
<termo> -> num int
<termo> -> num real
<md_while> -> enquanto(<cond>) facas inicio <varios_cmd> fim
<cond> -> (<termo> <op_rel> <termo>) <con_expre>
<cond> -> ~<cond>
<con_expre> -> <op_logico> <cond>
<con_expre> -> &
<op_rel> -> >
<op_rel> -> <
<op_rel> -> >=
<op_rel> -> <=</pre>
<op_rel> -> ~=
<op_rel> -> =
<op_logico> -> e
<op_logico> -> ou
<op_aritm> -> +
<op_aritm> -> -
<op_aritm> -> *
<op aritm> -> /
<md_if> -> sepah(<cond>) inicio <varios_cmd> fim <cmiff>
<miff> -> nem inicio <varios_cmd> fim
<cmiff> -> &
cprog_princ> -> @principale <varios_cmd> finale
```