```
 false 0 ; true -1 ;
 off () Textcomment (a) Textcomment (--) Textcomment () true swap ! ; on
() Textcomment (a) Textcomment (--) Textcomment () false swap ! ;
 pad () Textcomment (--) Textcomment (a) Textcomment () temporary space Vhere @
256 + ;
 The number conversion routines A and B address registers.
 hex 16 Base ! ; decimal 10 Base ! ; octal 8 Base ! ;
 8 Infd 8 Outfd
 type () Textcomment (a) Textcomment (n) Textcomment (--) Textcomment () Outfd @
-rot () Textcomment (fd) Textcomment (a) Textcomment (n) Textcomment () syswrite
drop ;
 negate () Textcomment (n) Textcomment (--) Textcomment (-1*n) Textcomment () not 1
+ ;
 abs () Textcomment (n) Textcomment (--) Textcomment (|n|) Textcomment () test -if
negate then ;
 asciise () Textcomment (u1) Textcomment (--) Textcomment (u2) Textcomment ()
converts a digit u1 to an ascii value
      10 - -if 1 + 57 ascii code of 9 + ; then
      97 ascii code of a + ;
 hold () Textcomment (c) Textcomment (--) Textcomment () put c in the ascii string c!- ;
 sign () Textcomment (n) Textcomment (--) Textcomment () test -if 45 ascii code of - hold
; then drop ;
 <# start number conversion 48 ascii code of 0 pad dup A! dup B! c! ;
 #> () Textcomment (--) Textcomment (a) Textcomment (n) Textcomment () A 1 + B A -
;
 # () Textcomment (u1) Textcomment (--) Textcomment (u2) Textcomment () write a
single digit in ascii at the address in A
      Base @ /mod asciise c!- ;
 #s () Textcomment (u1) Textcomment (--) Textcomment () convert u1 to an ascii string at
the adress in A
      begin # until ;
 . () Textcomment (n) Textcomment (--) Textcomment () A push B push dup abs <# #s
sign #> type pop B! pop A! ;
 OREAD 0 ; OWRITE 1 ; ORDWR 2 ; OTRUNC 16 ;
 close () Textcomment (fd) Textcomment (--) Textcomment () sysclose drop ;
 exit Infd @ close Outfd @ close bye ;
 8 Type 8 Len 264 Str
 read () Textcomment (a) Textcomment (n) Textcomment (--) Textcomment () Infd @ -rot
() Textcomment (fd) Textcomment (a) Textcomment (n) Textcomment () sysread test if
drop ; then eof exit ;
 swrite () Textcomment (counted_string) Textcomment (--) Textcomment () Outfd @
swap count syswrite drop ;
 space writes a space to outfd   literal swrite ;
 newline writes a newline to outfd   literal swrite ;
 tab writes a tab to outfd   literal swrite ;
 none do nothing exit ;
 >name read to Len and Str from Infd Len 1 read Str Len c@ read ;
 name> () Textcomment (counted_string) Textcomment (--) Textcomment () writes the
counted string, Len and Str to Outfd
      Len c@ . space Str Len c@ type space ;
```

```
 name () Textcomment (counted_string) Textcomment (--) Textcomment () read the name
and write the counted_string and name
      >name swrite name> ;
 >base Base 1 read ; base> Base @ . space ;
 num () Textcomment (counted_string) Textcomment (--) Textcomment () read the
number and write the counted_string and number
      >base >name swrite base> name> decimal ;
 number Number  literal num ; literalcompile Literalcompile  literal num ;
 textcomment Textcomment  literal name ; execute Execute  literal name ;
 compile Compile  literal name ; define Define  literal name ;
 variable Variable  literal name ; address Address  literal name ;
 macrocompile Macrocompile  literal name ; string String  literal name ;
 opens 1 arg OREAD sysopen Infd ! 2 arg OWRITE OTRUNC or sysopen Outfd ! ;
 type Type 1 read Type c@ ;
 interpret jump
      none ; textcomment ; execute ; number ; compile ; literalcompile ;
      macrocompile ; define ; variable ; tab ; newline ; address ; string ; none ;
 loop type interpret loop ;
 main opens loop ;
 opens
```