Sinclair BASIC you would be able to write:

```
2360 GOSUB (100*D)
```

to produce exactly the same effect. In both versions, however, you must consider what will happen if the value of D is non-integral, less than one, or greater than five.

Spectrum BASIC does not support the control structures REPEAT...UNTIL, and WHILE...WEND. These can, however, be simulated in several ways. The REPEAT structure is a loop starting at the word REPEAT, and finishing at the word UNTIL, which is followed by a conditional statement. If this condition is true then the loop terminates and control passes to the statement after UNTIL. On the Spectrum, this control structure can be simulated in this way:

```
100 DATA "A","B","C","D","E","*","F","G","*"
200 FOR L=1 TO 1
300 READ X$
400 PRINT X$
500 IF X$<>"*" THEN LET L=0
550 NEXT L
600 PRINT"END OF DATA"
```

The problem with the REPEAT...UNTIL structure is that, because the exit condition is tested at the end of the loop, the loop will always be executed at least once. If this is undesirable, then the WHILE...WEND structure should be used.

This structure is a loop starting at the WHILE statement (which is followed by a condition) and ending at the W(HILE)END statement. As long as the condition is untrue, the program statements between WHILE and WEND will be executed repeatedly. When the condition is true, control passes from the WHILE statement to the statement after WEND (the statements in between are skipped over). The program given, therefore, would read:

```
100 DATA "A","B","C","D","E","*","F","G","*"
200 WHILE X$<>"*" DO
300 READ X$
400 PRINT X$
500 WEND
600 PRINT"END OF DATA"
```

This could be replaced on the Sinclair machines by an IF...THEN...GOTO structure, but another alternative is:

```
50 LET X$=""
100 DATA "A","B","C","D","E","*","F","G","*"
200 LET TEST=(X$<>"*")
250 FOR L=1 TO TEST
300 READ X$
400 PRINT X$
500 LET L=(X$="*")
550 NEXT L
600 PRINT"END OF DATA"
```

We have dealt with the major variations in Sinclair BASIC. There are other smaller differences, some of which are bugs rather than genuine changes, but with care and the handbook you should be able to cope.

OPEN #
CLOSE #
Used with the Microdrive when writing or reading a data file on the Microdrive

CAT
Displays the list of programs and files on the Microdrive wafer currently in use

MERGE
Loads a program from cassette or wafer so that the incoming program merges with the program currently in memory

IN
OUT
Allows the microprocessor to communicate with peripheral hardware via a specified input/output port

PAUSE
Causes a halt in program execution for a specified time; the halt can be interrupted by any keypress

ATTR
Returns a number that can be decoded to reveal the colour information for any screen position

FORMAT
Prepares a new Microdrive wafer for use, or erases an old wafer for re-use

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