■ **Arithmetic 4** What result will be printed in this program?

```
LET A = 3
LET B = 2
LET C = 9
LET D = 4
LET E = (A + B) * (C - D)
PRINT E

LET E = 5
LET E = E * E
PRINT E
```

■ **Comparisons 1** What value of X will be required for the PRINT message to be printed?

```
70 LET A = 5
80 LET B = X
90 LET R = B - A
100 IF R = 0 THEN GOTO 120
110 GOTO 10
120 PRINT "CONGRATULATIONS! YOU HAVE WON"
999 END
```

■ **Comparisons 2** What is the smallest value of X that will make the program jump to line 300?

```
250 IF X > 6 * 100 THEN GOTO 300
```

■ **Comparisons 3** What is the smallest value of Z that will make the program jump to the 'congratulations' message?

```
340 IF Z < 10000 THEN GOTO 500
350 IF Z >= 10000 THEN GOTO 520
:
:
500 PRINT "YOUR SCORE IS TOO LOW. TRY AGAIN"
510 GOTO 600
520 PRINT "CONGRATULATIONS. YOU ARE NOW A
MASTER"
530 GOTO 700
```

■ **Print 1** Assume that the value of T is 50. Write a PRINT statement that will print THE VALUE OF T IS 50. Hint: Put the 'message' in double quotes, use a semi-colon and the variable name.

■ **Print 2** Look at the following short program and complete the PRINT statement so that the program will print a score message like this:

SORRY, BUT YOUR SCORE OF 175 IS TOO LOW

Complete the line so that the actual value of the score can vary each time.

```
620 REM VARIABLE S IS THE SCORE SO FAR
620 IF S <= 500 THEN GOTO 640
630 GOTO 700
640 PRINT "SORRY"
```

■ **Print 3** What message will be printed when the program is run?

```
200 LET A$= "THE HOME COMPUTER COURSE ?"
210 LET B$ = "HOW DO YOU LIKE ";
220 PRINT B$
230 PRINT A$
```

■ **Input 1** INPUT is one way of assigning a value to a variable. If the following program is run, which key will need to be pressed for the program to print out an answer of 12?

```
60 INPUT N
70 LET N = N * 2
80 PRINT N
```

■ **Input 2** What will be printed here?

```
100 PRINT "PLEASE TYPE YOUR NAME"
110 INPUT N$
120 PRINT "HI ";N$;"I'M YOUR COMPUTER"
```

Basic Flavours

This program will not run on the Atari 400 and 800 because their string handling is so different from that of other machines

DIM

On the ZX81 and Spectrum replace line 310 by:
310 DIM A$ (N,30)
This creates a string array called A$ that has N elements, each of them 30 characters long.
On the Lynx replace line 310 by:
310 DIM A$ (30) (N)

GOTO

In line 1050 the command GOTO 1000 comes immediately after the word THEN. In this case, most computers allow you to omit the word GOTO; so line 1050 might be written
1050 IF S=1 THEN 1000

INSTR

This command is not available on the ZX81, Spectrum, Commodore 64, Vic-20 and Oric-1. On the Commocore machines and the Oric-1 delete line 520 and replace it by:

```
515 LET S= 0
520 FOR P=1 TO L
523 IF MID$(A$(X),P,1)=" " THEN LET S=P
524 IF S=P THEN LET P=L
525 NEXT L
```

On the Spectrum and ZX81 delete lines 510 to 560, and replace them by:

```
510 LET D$=A$(X)
520 LET L=LEN D$
530 LET S =0
540 FOR P=1 TO 1
550 IF D$(P)=" " THEN LET S=P
560 IF S=P THEN LET P=L
570 NEXT P
580 LET C$=D$( TO S-1)
590 LET F$=D$(L-S)
600 LET A$(X)=F$+", "+C$
610 RETURN
```

LEFT$

RIGHT$

MID$

None of these commands is available on the Spectrum or ZX81. Their equivalents in Sinclair BASIC are:

LEFT$(Z$,N)	replace by Z$(TO N)
RIGHT$(Z$,N)	replace by Z$(LEN(Z$)-N+1 TO)
MID$(Z$,P,N)	replace by Z$(P TO P+N-1)