

PROGRAMMING - 1

I.T. HOMEWORK - YEAR 8 SHEET 15



FLOWCHARTS

Flowcharts can be used to work out how to write computer programs accurately. Flowcharts can help with accuracy because they let you see what your program should do more easily than if you simply start to write the program directly on the computer.

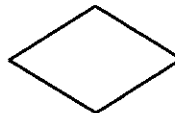
A REMINDER OF FLOWCHART SYMBOLS



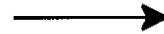
START AND STOP SYMBOL



PROCESS BOX



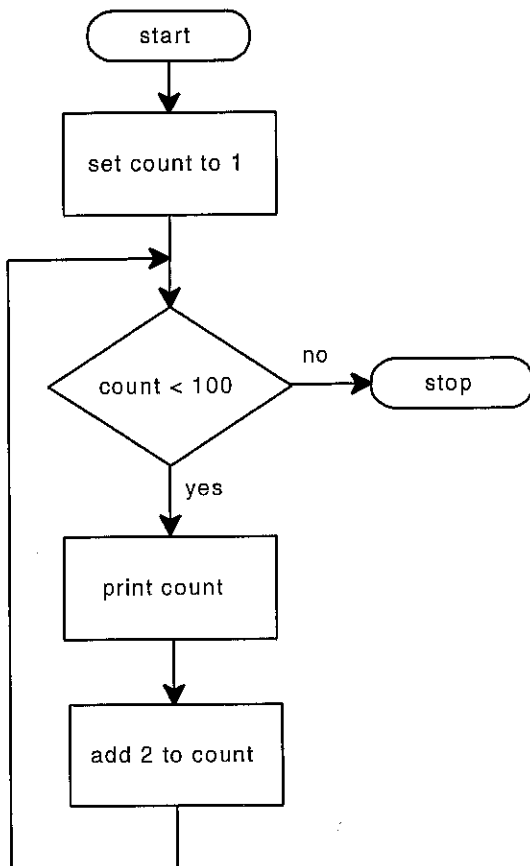
DECISION BOX



DIRECTION ARROW

PRINTING ODD NUMBERS

Here's a flowchart to print all the odd numbers between 1 and 100. In other words, the numbers will come out in the following way: 1, 3, 5, 7, 9, 11, 13 .. all the way up to 99. Under the flowchart is the actual program that relates to the flowchart.



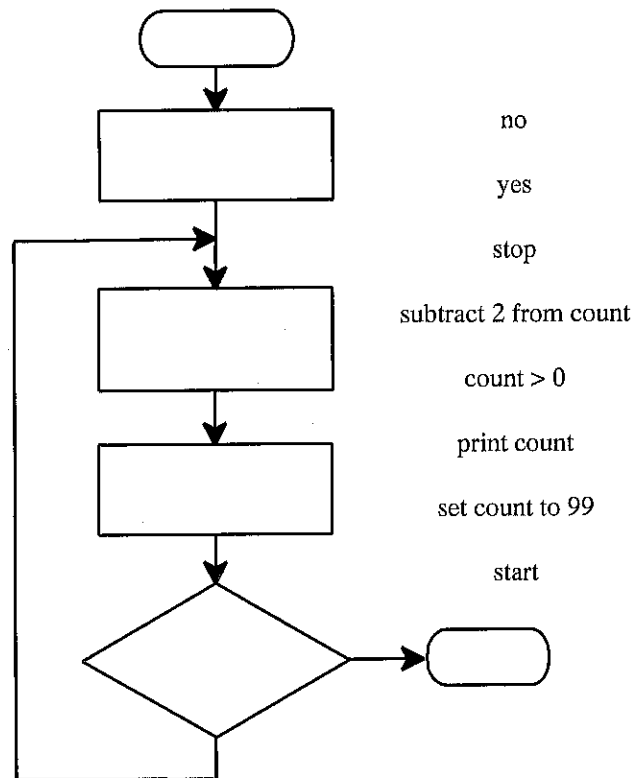
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LET count = 1
DO WHILE count < 100
    PRINT count;
    LET count = count + 2
LOOP
    
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ACTIVITIES

Here's a flowchart to print all the odd numbers from 100 down to 1. In other words, the numbers will come out in the following way: 99, 97, 95, 93, 91, 89 .. all the way down to 1.

The text fragments for the program are given below on the right. Place these in the appropriate box.



EXTENSION ACTIVITIES

- 1) Write the program for the above flowchart.
- 2) On the back of this sheet, draw a flowchart for a program to print powers of 2 up to 128. In other words: 2, 4, 8, 16, 32, 64, 128. The program should also print out the sum of these numbers i.e. the sum of 2 + 4 + 8 + 16 + 32 + 64 + 128.

