

Loading and using the demonstration programs

To load the first demonstration program PRIMES enter LOAD "" and start the tape at the beginning of side 2. When the message 'Press required key' appears you should press J and ENTER to load the Fortran program PRIMES. When this has loaded press X to compile it and then load the second part of the compiler after the buzz sounds. When the program information appears at the top of the screen press ENTER. The computer will then be reset with the compiled program stored above RAMTOP. Enter RANDOMISE USR 63500 to run the compiled program. The prime numbers between 1 and 10000 will be printed on the screen.

The other demonstration programs are after the second part of the compiler on the tape. To load them the first part should be loaded as above and then the tape wound on to load the required program and then back to the second part of the compiler.

The second demonstration program is FUNCT. This contains 3 subroutines which will plot out the graph of a function $F(X)$, evaluate the integral of F and solve the equation $F(X)=0$ using numerical methods. These subroutines are demonstrated for the functions $\text{COS}(X)$ and $\text{EXP}(-X^2/2) - X/2$ but you could use them in your own programs for other functions.

The third demonstration program is LSFIT. This inputs a number N and then inputs N pairs of points (X_i, Y_i) . It then finds the best fit straight line through these points by the method of least squares, both for Y as a function of X and for X as a function of Y , and it plots the two lines on the screen. The numbers should be input from stream 4, so that to input them from a microdrive file it should be OPENed with this number, and to enter them from the keyboard you should enter OPEN#4,"K" before running the compiled Fortran program. The numerical results will then be printed out on stream 3 (i.e. a printer). You could print them on the screen using OPEN#3,"S".