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100 REM Function Plotter
110 REM (c) R.P. Morgan +
G. Nicholson
120 :
130 :
140 REM *****
150 REM * YOUR FUNCTION GOES BELOW *
160 REM *****
170 :
180 :
190 DEF FNf(x)=LOG(x)
200 :
210 :
220 ON ERROR GOTO 10000
230 MODE 1
240 DEG
250 INPUT "Lower X value ";x1
260 INPUT "Upper X value ";xu
270 INPUT "Step size ";s
280 CLS
290 SPEED INK 50,50
300 LOCATE 14,10:INK 3,24,1:PEN
3:PRINT "CALCULATING"
310 xcoords=(xu-x1)/s
320 DIM x(xcoords+2),y(xcoords+2)
330 nu=1
340 FOR xcoord=x1 TO xu STEP s
350 x(nu)=xcoord
360 y(nu)=FNf(xcoord)
370 nu=nu+1
380 NEXT xcoord
390 nu=nu-1
400 ys=y(1):yb=y(1)
410 xs=x(1):xb=x(xcoords)
420 FOR f=1 TO xcoords
430 IF y(f)>yb THEN yb=y(f)
440 IF y(f)<ys THEN ys=y(f)
450 NEXT f
460 yscale=400/(yb-ys)

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470 xscale=640/(xb-xs)
480 FOR f=1 TO xcoords
490 x(f)=x(f)*xscale
500 y(f)=y(f)*yscale
510 NEXT f
520 y0=ABS(0-ys)
530 yorig=y0*yscale
540 x0=ABS(0-xs)
550 xorig=x0*xscale
560 MODE 2
570 MOVE xorig,0:DRAW xorig,400
580 MOVE 0,yorig:DRAW 640,yorig
590 ORIGIN xorig,yorig
600 FOR f=1 TO xcoords
610 PLOT x(f),y(f)
620 NEXT f
630 a$=INKEY$:IF a$="" THEN 630
640 IF a$="f" OR a$="F" THEN MODE
1:LIST 190:END
650 RUN
10000 MODE 2:PEN 1
10010 IF ERR=11 THEN PRINT "Your
range & function involves a
division by zero inline "ERL:GOTO
10050
10020 IF ERR=6 THEN PRINT "Your
range & function involves a number
too large for, or undefined for,
the computer in "ERL:GOTO 10050
10030 PRINT "Error number "ERR" in
line "ERL
10050 END

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