

```

10 '*****
20 '*
30 '* - GRAPHX - *
40 '* POR *
50 '* CESAR VALENCIA PERELLO *
60 '* MEGA-OCIO *
70 '* *
80 '*****
90 '
95 '*** !!! NO MODIFICAR LA NUMERACION D
E LAS LINEAS !!! ***
97 '
100 INK 0,0:BORDER 0:INK 1,0
110 KEY 9,CHR$(13)+"goto 900"+CHR$(13)
120 DEFREAL A-Z
130 MODE 2
140 MOVE 150,1:DRAWR 338,0:DRAWR 0,378:D
RAWR -338,0:DRAWR 0,-378:MOVE 156,6:DRW
R 328,0:DRAWR 0,368:DRAWR -328,0:DRAWR 0
,-368
150 LOCATE 36,8:PRINT"- GRAPH X -"
160 LOCATE 40,11:PRINT"POR"
170 LOCATE 30,14:PRINT "CESAR VALENCIA P
ERELLO"
180 LOCATE 35,17:PRINT"AMSTRAD OCIO":LOC
ATE 39,20:PRINT"1990"
190 LOCATE 27,6:PRINT STRING$(28,CHR$(14
3)):LOCATE 27,22:PRINT STRING$(28,CHR$(1
43)):FOR L=7 TO 21:LOCATE 27,L:PRINT CHR
$(143):LOCATE 54,L:PRINT CHR$(143):NEXT
200 INK 1,20
210 GOSUB 2900
220 CALL &BB18
230 INK 1,0
240 MODE 2:LOCATE 38,3:PRINT"MENU"
250 LOCATE 25,6:PRINT"Grafica LINEAL ...
... y=b+a"CHR$(144)"x"
260 LOCATE 25,8:PRINT"Grafica LOGARITMIC

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A .. y=b+a"CHR$(144)"log(x)"
270 LOCATE 25,10:PRINT"Grafica POTENCIAL
... y=b"CHR$(144)"x"CHR$(160)"a"
280 LOCATE 25,12:PRINT"Grafica EXPONENCI
AL .. y=b"CHR$(144)"a"CHR$(160)"x"
290 LOCATE 25,14:PRINT"Grafica HIPERBOLI
CA .. y=b+a/x"
300 LOCATE 25,16:PRINT"Grafica PARABOLIC
A .. y=a"CHR$(144)"x"CHR$(160)"2+b"CHR$(
144)"x+c"
310 LOCATE 25,18:PRINT"Grafica INDEFINID
A ... (Usuario)"
320 LOCATE 3,23:PRINT"Seleccione la opci
on deseada con los cursores "CHR$(240)"
y "CHR$(241)" 'SPACE' para validar."
330 INK 1,20
340 yc=6
350 LOCATE 23,yc:PRINT CHR$(243)
360 IF INKEY(0)=0 AND yc>6 THEN LOCATE 2
3,yc:PRINT " ":yc=yc-2:SOUND 1,201,3,13
370 IF INKEY(2)=0 AND yc<18 THEN LOCATE
23,yc:PRINT " ":yc=yc+2:SOUND 1,201,3,13
380 IF INKEY(47)=0 THEN GOTO 420
390 LOCATE 23,yc:PRINT CHR$(243)
400 FOR r=1 TO 100:NEXT
410 GOTO 350
420 IF yc=6 THEN GOTO 1940
430 IF yc=8 THEN GOTO 2090
440 IF yc=10 THEN GOTO 2240
450 IF yc=12 THEN GOTO 2390
460 IF yc=14 THEN GOTO 2540
470 IF yc=16 THEN GOTO 2690
480 IF yc=18 THEN GOTO 2860
490 MODE 2
500 LOCATE 1,1:PRINT"Y=";y2$
510 LOCATE 1,14:PRINT"-x":LOCATE 79,14:P
RINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 38
,25:PRINT"-y"

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520 PT$="Espere un momento":LOCATE 79-LE
N(PT$),24:PRINT PT$
530 MOVE 320,0:DRAWR 0,400:MOVE 0,200:DR
AWR 640,0
540 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:D
RAWR 4,0:NEXT
550 FOR CU2=0 TO 640 STEP 8:MOVE CU2,198
:DRAWR 0,4:NEXT
560 FOR X=(-39.8) TO 40 STEP 0.03
570 IF COO=1 THEN GOTO 680
580 y=(bb)+((aa)/(x+39.9))
590 IF Y>27 OR Y<(-24) THEN GOTO 680
600 A=INT(320+X*8)
610 B=INT(200+Y*8)
620 PLOT A,B
630 IF A>640 OR A<1 THEN COO=1
640 IF B>400 AND SGN(bb)=-1 THEN COO=1
650 IF B<1 AND SGN(bb)=1 THEN COO=1
660 LOCATE 1,22:PRINT "x=";USING"###.###
#####";X
670 LOCATE 1,24:PRINT "y=";USING"###.###
#####";Y
680 NEXT
685 GOTO 2930
690 MODE 2
700 LOCATE 1,1:PRINT"Y=";y2$
710 LOCATE 1,14:PRINT"-x":LOCATE 79,14:P
RINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 38
,25:PRINT"-y"
720 PT$="Espere un momento":LOCATE 79-LE
N(PT$),24:PRINT PT$
730 MOVE 320,0:DRAWR 0,400:MOVE 0,200:DR
AWR 640,0
740 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:D
RAWR 4,0:NEXT
750 FOR CU2=0 TO 640 STEP 8:MOVE CU2,198
:DRAWR 0,4:NEXT
760 FOR X=(-39.8) TO 40 STEP 0.03
770 IF COO=1 THEN GOTO 880
780 y=(aa)*x^2+(bb)*x+cc
790 IF Y>27 OR Y<(-24) THEN GOTO 880
800 A=INT(320+X*8)
810 B=INT(200+Y*8)
820 PLOT A,B
830 IF A>640 OR A<1 THEN COO=1
840 IF B>400 AND SGN(bb)=-1 THEN COO=1
850 IF B<1 AND SGN(bb)=1 THEN COO=1
860 LOCATE 1,22:PRINT "x=";USING"###.###
#####";X
870 LOCATE 1,24:PRINT "y=";USING"###.###
#####";Y
880 NEXT
890 GOTO 2930
900 MODE 2
910 LOCATE 1,1:PRINT"Y= [Indefinida en c
urso]"
920 LOCATE 1,14:PRINT"-x":LOCATE 79,14:P
RINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 38
,25:PRINT"-y"
930 PT$="Espere un momento":LOCATE 79-LE
N(PT$),24:PRINT PT$
940 MOVE 320,0:DRAWR 0,400:MOVE 0,200:DR
AWR 640,0
950 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:D
RAWR 4,0:NEXT

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960 FOR CU2=0 TO 640 STEP 8:MOVE CU2,198
:DRAWR 0,4:NEXT
970 FOR X=(-39.8) TO 40 STEP 0.03
980 IF COO=1 THEN GOTO 1090
990 y=SIN(x)
1000 IF Y>27 OR Y<(-24) THEN GOTO 1090
1010 A=INT(320+X*8)
1020 B=INT(200+Y*8)
1030 PLOT A,B
1040 IF A>640 OR A<1 THEN COO=1
1050 IF B>400 AND SGN(bb)=-1 THEN COO=1
1060 IF B<1 AND SGN(bb)=1 THEN COO=1
1070 LOCATE 1,22:PRINT "x=";USING"###.###
#####";X
1080 LOCATE 1,24:PRINT "y=";USING"###.###
#####";Y
1090 NEXT
1100 GOTO 2930
1110 '
1120 MODE 2
1130 LOCATE 1,1:PRINT"Y=";y2$
1140 LOCATE 1,14:PRINT"-x":LOCATE 79,14:
PRINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 3
8,25:PRINT"-y"
1150 PT$="Espere un momento":LOCATE 79-L
EN(PT$),24:PRINT PT$
1160 MOVE 320,0:DRAWR 0,400:MOVE 0,200:D
RAWR 640,0
1170 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:
DRAWR 4,0:NEXT
1180 FOR CU2=0 TO 640 STEP 8:MOVE CU2,19
8:DRAWR 0,4:NEXT
1190 FOR X=(-39.8) TO 40 STEP 0.03
1200 IF COO=1 THEN GOTO 1310
1210 y=(bb)+(aa)*x
1220 IF Y>27 OR Y<(-24) THEN GOTO 1310
1230 A=INT(320+X*8)
1240 B=INT(200+Y*8)
1250 PLOT A,B
1260 IF A>640 OR A<1 THEN COO=1
1270 IF B>400 AND SGN(bb)=-1 THEN COO=1
1280 IF B<1 AND SGN(bb)=1 THEN COO=1
1290 LOCATE 1,22:PRINT "x=";USING"###.###
#####";X
1300 LOCATE 1,24:PRINT "y=";USING"###.###
#####";Y
1310 NEXT
1320 GOTO 2930
1330 MODE 2
1340 LOCATE 1,1:PRINT"Y=";y2$
1350 LOCATE 1,14:PRINT"-x":LOCATE 79,14:
PRINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 3
8,25:PRINT"-y"
1360 PT$="Espere un momento":LOCATE 79-L
EN(PT$),24:PRINT PT$
1370 MOVE 320,0:DRAWR 0,400:MOVE 0,200:D
RAWR 640,0
1380 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:
DRAWR 4,0:NEXT
1390 FOR CU2=0 TO 640 STEP 8:MOVE CU2,19
8:DRAWR 0,4:NEXT
1400 FOR X=(-39.8) TO 40 STEP 0.1
1410 IF COO=1 THEN GOTO 1720
1420 y=(aa)+(bb)*(LOG10(x+39.9))
1430 IF Y>27 OR Y<(-24) THEN GOTO 1520

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1440 A=INT(320+X*8)
1450 B=INT(200+Y*8)
1460 PLOT A,B
1470 IF A>640 OR A<1 THEN COO=1
1480 IF B>400 AND SGN(bb)=-1 THEN COO=1
1490 IF B<1 AND SGN(bb)=1 THEN COO=1
1500 LOCATE 1,22:PRINT "x=";USING"###.##
#####";X
1510 LOCATE 1,24:PRINT "y=";USING"###.##
#####";Y
1520 NEXT
1530 GOTO 2930
1540 MODE 2
1550 LOCATE 1,1:PRINT"Y=";y2$
1560 LOCATE 1,14:PRINT"-x":LOCATE 79,14:
PRINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 3
8,25:PRINT"-y"
1570 PT$="Espere un momento":LOCATE 79-L
EN(PT$),24:PRINT PT$
1580 MOVE 320,0:DRAWR 0,400:MOVE 0,200:D
RAWR 640,0
1590 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:
DRAWR 4,0:NEXT
1600 FOR CU2=0 TO 640 STEP 8:MOVE CU2,19
8:DRAWR 0,4:NEXT
1610 FOR X=(-39.8) TO 40 STEP 0.05
1620 IF COO=1 THEN GOTO 1720
1630 y=(bb)*((x+39.9)^aa)
1640 IF Y>(26.875) OR Y<(-26) THEN GOTO
1720
1650 A=INT(320+X*8)
1660 B=INT(200+Y*8)
1670 PLOT A,B
1680 IF A>640 OR A<1 THEN COO=1
1690 IF B>400 OR B<1 THEN COO=1
1700 LOCATE 1,22:PRINT "x=";USING"###.##
#####";X
1710 LOCATE 1,24:PRINT "y=";USING"###.##
#####";Y
1720 NEXT
1730 MODE 2
1740 LOCATE 1,1:PRINT"Y=";y2$
1750 LOCATE 1,14:PRINT"-x":LOCATE 79,14:
PRINT"+x":LOCATE 38,1:PRINT"+y":LOCATE 3
8,25:PRINT"-y"

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```

1760 PT$="Espere un momento":LOCATE 79-L
EN(PT$),24:PRINT PT$
1770 MOVE 320,0:DRAWR 0,400:MOVE 0,200:D
RAWR 640,0
1780 FOR CU=1 TO 400 STEP 8:MOVE 318,CU:
DRAWR 4,0:NEXT
1790 FOR CU2=0 TO 640 STEP 8:MOVE CU2,19
8:DRAWR 0,4:NEXT
1800 FOR X=(-39.8) TO 40 STEP 0.05
1810 IF COO=1 THEN GOTO 1920
1820 y=(bb)*((aa)^(x+39.9))
1830 IF Y>27 OR Y<(-24) THEN GOTO 1920
1840 A=INT(320+X*8)
1850 B=INT(200+Y*8)
1860 PLOT A,B
1870 IF A>640 OR A<1 THEN COO=1
1880 IF B>400 AND SGN(bb)=-1 THEN COO=1
1890 IF B<1 AND SGN(bb)=1 THEN COO=1
1900 LOCATE 1,22:PRINT "x=";USING"###.##
#####";X
1910 LOCATE 1,24:PRINT "y=";USING"###.##
#####";Y
1920 NEXT
1930 GOTO 2930
1940 '*** LINEAL ***
1950 MODE 2:GOSUB 2960
1960 GOSUB 2900
1970 LOCATE 33,2:PRINT"FUNCION LINEAL"
1980 LOCATE 3,5:PRINT"Funcion Lineal de
modo : y=b+a
1990 LOCATE 3,8:PRINT"Introduzca el valo
r del termino 'b'"
2000 LOCATE 3,10:INPUT"b = ",bb
2010 LOCATE 3,13:PRINT"Introduzca el val
or del termino 'a'"
2020 LOCATE 3,15:INPUT"a = ",aa
2030 LOCATE 3,20:PRINT"PULSE UNA TECLA P
ARA REPRESENTAR."
2040 GOSUB 2900
2050 CALL &BB18
2060 y2$=""
2070 y2$=STR$(bb)+" "+STR$(aa)+CHR$(144
)+"x"
2080 GOTO 1110
2090 '*** LOGARITMICA ***

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2100 MODE 2:GOSUB 2960
2110 GOSUB 2900
2120 LOCATE 31,2:PRINT"FUNCION LOGARITMI
CA"
2130 LOCATE 3,5:PRINT"Funcion Logaritmica
de modo : y=b+a"CHR$(144)"log(x)"
2140 LOCATE 3,8:PRINT"Introduzca el valo
r del termino 'b'"
2150 LOCATE 3,10:INPUT"b = ",bb
2160 LOCATE 3,13:PRINT"Introduzca el val
or del termino 'a'"
2170 LOCATE 3,15:INPUT"a = ",aa
2180 LOCATE 3,20:PRINT"PULSE UNA TECLA P
ARA REPRESENTAR."
2190 GOSUB 2900
2200 CALL &BB18
2210 y2$=""
2220 y2$=STR$(bb)+" "+STR$(aa)+CHR$(144
)+"log(x)"
2230 GOTO 1330
2240 '*** POTENCIAL ***
2250 MODE 2:GOSUB 2960
2260 GOSUB 2900
2270 LOCATE 33,2:PRINT"FUNCION POTENCIAL
"
2280 LOCATE 3,5:PRINT"Funcion Potencial
de modo : y=b"CHR$(144)"(x"CHR$(160)"a)"
2290 LOCATE 3,8:PRINT"Introduzca el valo
r del termino 'b'"
2300 LOCATE 3,10:INPUT"b = ",bb
2310 LOCATE 3,13:PRINT"Introduzca el val
or del termino 'a'"
2320 LOCATE 3,15:INPUT"a = ",aa
2330 LOCATE 3,20:PRINT"PULSE UNA TECLA P
ARA REPRESENTAR."
2340 GOSUB 2900
2350 CALL &BB18
2360 y2$=""
2370 y2$=STR$(bb)+CHR$(144)+"(x"+CHR$(16
0)+STR$(aa)+")"
2380 GOTO 1540
2390 '*** EXPONENCIAL ***
2400 MODE 2:GOSUB 2960
2410 GOSUB 2900
2420 LOCATE 31,2:PRINT"FUNCION EXPONENCI
AL"
2430 LOCATE 3,5:PRINT"Funcion Potencial
de modo : y=b"CHR$(144)"(a"CHR$(160)"x)"
2440 LOCATE 3,8:PRINT"Introduzca el valo
r del termino 'b'"
2450 LOCATE 3,10:INPUT"b = ",bb
2460 LOCATE 3,13:PRINT"Introduzca el val
or del termino 'a'"
2470 LOCATE 3,15:INPUT"a = ",aa
2480 LOCATE 3,20:PRINT"PULSE UNA TECLA P
ARA REPRESENTAR."
2490 GOSUB 2900
2500 CALL &BB18
2510 y2$=""
2520 y2$=STR$(bb)+CHR$(144)+"("+STR$(aa)
+CHR$(160)+"x)"
2530 GOTO 1730
2540 '*** HIPERBOLICA ***
2550 MODE 2:GOSUB 2960
2560 GOSUB 2900

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2570 LOCATE 32,2:PRINT"FUNCION HIPERBOLI
CA"
2580 LOCATE 3,5:PRINT"Funcion Hiperbolic
a de modo : y=b+a/x"
2590 LOCATE 3,8:PRINT"Introduzca el valo
r del termino 'b'"
2600 LOCATE 3,10:INPUT"b = ",bb
2610 LOCATE 3,13:PRINT"Introduzca el val
or del termino 'a'"
2620 LOCATE 3,15:INPUT"a = ",aa
2630 LOCATE 3,20:PRINT"PULSE UNA TECLA P
ARA REPRESENTAR."
2640 GOSUB 2900
2650 CALL &BB18
2660 y2$=""
2670 y2$=STR$(bb)+" "+STR$(aa)+"/x"
2680 GOTO 490
2690 '*** PARABOLICA ***
2700 MODE 2:GOSUB 2960
2710 GOSUB 2900
2720 LOCATE 31,2:PRINT"FUNCION PARABOLIC
A"
2730 LOCATE 3,5:PRINT"Funcion Parabolica
de modo : y=a"CHR$(144)"x"CHR$(160)"2+b
"CHR$(144)"x+c"
2740 LOCATE 3,8:PRINT"Introduzca el valo
r del termino 'a'"
2750 LOCATE 3,10:INPUT"a = ",aa
2760 LOCATE 3,13:PRINT"Introduzca el val
or del termino 'b'"
2770 LOCATE 3,15:INPUT"b = ",bb
2780 LOCATE 3,18:PRINT"Introduzca el val
or del termino 'c'"
2790 LOCATE 3,20:INPUT"c = ",cc
2800 LOCATE 3,23:PRINT"PULSE UNA TECLA P
ARA REPRESENTAR."
2810 GOSUB 2900
2820 CALL &BB18
2830 y2$=""
2840 y2$=STR$(aa)+CHR$(144)+"x"+CHR$(160
)+"+2"+STR$(bb)+CHR$(144)+"x"+STR$(cc)
2850 GOTO 690
2860 '*** INDEFINIDA (Usuario) ***
2870 MODE 2:GOSUB 2960:GOSUB 2900:LOCATE
31,2:PRINT"FUNCION INDEFINIDA"
2880 LOCATE 3,5:PRINT"Instaure en la sig
uiente linea la funcion deseada.":LOCATE
3,7:PRINT"Despues pulse la tecla [f9].":
LOCATE 3,9:PRINT"990 y=[funcion deseada
.p.ej: SIN (x)]:LOCATE 3,11:EDIT 990
2890 END
2900 WHILE INKEY$<>""
2910 WEND
2920 RETURN
2930 u$="Pulse una tecla para volver al
menu.":LOCATE 79-LEN(u$),24:PRINT u$
2940 GOSUB 2900:CALL &BB18
2950 GOTO 230
2960 MOVE 1,1:DRAWR 638,0:DRAWR 0,398:DR
AWR -638,0:DRAWR 0,-398
2970 MOVE 6,394:DRAWR 628,0:DRAWR 0,-40:
DRAWR -628,0:DRAWR 0,40
2980 MOVE 6,350:DRAWR 628,0:DRAWR 0,-346
:DRAWR -628,0:DRAWR 0,346
2990 RETURN

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