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10 DEFINT a-n:INK 0,0:CLS
20 DIM d(64,32) : zzz=TIME:RANDOMIZE zzz
30 INPUT "Nivel de recursion ?";le
40 MODE 1
50 ds=2:FOR n=1 TO le:ds=ds+2^(n-1):NEXT
  n
60 mx=ds-1: my=mx/2: rh=PI*30/180 : vt=r
  h*1.2
70 FOR n=1 TO le: l=10000/1.8^n
80 PRINT "Trabajando en el nivel ";n
90 ib=mx/2^n:sk=ib*2
100 GOSUB 160 : 'Alturas a lo largo de x
110 GOSUB 230 : 'Alturas a lo largo de y
120 GOSUB 300 : 'Alturas en la diagonal
130 NEXT n
140 GOTO 650 : 'Dibujo
150 ' Alturas en direccion x
160 FOR ye=0 TO mx-1 STEP sk
170 FOR xe=ib+ye TO mx STEP sk
180 ax=xe-ib:ay=ye:GOSUB 380:d1=d:ax=xe
+ib:GOSUB 380: d2=d
190 d=(d1+d2)/2 + RND(1)*1/2 - 1/4: ax=
xe:ay=ye:GOSUB 430
200 NEXT xe
210 NEXT ye:RETURN
220 ' Alturas en el eje y
230 FOR xe=mx TO 1 STEP -sk
240 FOR ye=ib TO xe STEP sk
250 ax=xe: ay=ye+ib : GOSUB 380: d1=d :
  ay = ye - ib : GOSUB 380 : d2=d
260 d=(d1+d2)/2+RND(1)*1/2-1/4:ax=xe:ay
=ye:GOSUB 430
270 NEXT ye
280 NEXT xe:RETURN
290 ' Alturas en la diagonal
300 FOR xe=0 TO mx-1 STEP sk
310 FOR ye=ib TO mx-xe STEP sk
320 ax=xe+ye-ib: ay=ye-ib: GOSUB 380: d
  1=d
330 ax=xe+ye+ib: ay=ye+ib: GOSUB 380: d
  2=d
340 ax=xe+ye: ay=ye: d=(d1+d2)/2+ RND(1
)*1/2-1/4: GOSUB 430
350 NEXT ye
360 NEXT xe: RETURN
370 ' Obtencion de datos de la matriz
380 IF ay>my THEN 400
390 by=ay: bx=ax: GOTO 410
400 by=mx+1-ay: bx=mx-ax
410 d=d(bx,by): RETURN
420 ' Escritura en la matriz
430 IF ay>my THEN 450
440 by=ay: bx=ax: GOTO 460
450 by=mx+1-ay: bx=mx-ax
460 d(bx,by)=d: RETURN
470 ' Aqui se situa el nivel del mar
480 IF x0<>-999 THEN 510
490 IF zz<0 THEN GOSUB 1080: z2=zz: zz=0
  : GOTO 630
500 GOSUB 1100: GOTO 620
510 IF z2>0 AND zz>0 THEN 620
520 IF z2<0 AND zz<0 THEN z2=zz: zz=0: G
  OTO 630
530 w3=zz/(zz-z2): x3=(x2-xx)*w3+xx:y3=(
  y2-yy)*w3+yy: z3=0
540 zt=zz: yt=yy: xt=xx
550 IF zz>0 THEN 600
560 ' Aqui va agua
570 zz=z3: yy=y3: xx=x3: GOSUB 960
580 GOSUB 1080: zz=0: yy=yt: xx=xt: z2=z

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t: GOTO 630
590 ' Emerge del agua
600 zz=z3: yy=y3: xx=x3: GOSUB 960
610 GOSUB 1100: zz=zt: yy=yt: xx=xt
620 z2=zz
630 x2=xx: y2=yy: RETURN
640 ' presentacion en pantalla
650 GOSUB 1120: 'Inicializa la pantalla
660 xs=0.05: ys=0.05: zs=0.05: ' Factore
s de escala
670 FOR ax=0 TO mx: x0=-999: FOR ay=0 TO
ax
680 GOSUB 380: zz=d: yy=ay/mx*10000: xx=
ax/mx*10000-yy/2
690 GOSUB 950: NEXT ay: NEXT ax
700 FOR ay=0 TO mx: x0=-999: FOR ax=ay T
O mx
710 GOSUB 380: zz=d: yy=ay/mx*10000: xx=
ax/mx*10000-yy/2
720 GOSUB 950: NEXT ax: NEXT ay
730 FOR ex=0 TO mx: x0=-999: FOR ey=0 TO
mx-ex
740 ax=ex+ey: ay=ey: GOSUB 380: zz=d: yy
=ay/mx*10000
750 xx=ax/mx*10000-yy/2: GOSUB 950: NEXT
ey: NEXT ex
760 GOTO 1140: 'Acabo y sale del bucle
770 ' Rotar
780 IF xx<>0 THEN 810
790 IF yy<=0 THEN ra=-PI/2: GOTO 830
800 ra=PI/2: GOTO 830
810 ra=ATN(yy/xx)
820 IF xx<0 THEN ra=ra+PI
830 r1=ra+rh:rd=SQR(xx*xx+yy*yy)
840 xx=rd*COS(r1):yy=rd*SIN(r1)
850 RETURN
860 ' ??????
870 rd=SQR(zz*zz+xx*xx)
880 IF xx=0 THEN ra=PI/2: GOTO 910
890 ra=ATN(zz/xx)
900 IF xx<0 THEN ra=ra+PI
910 r1=ra-vt
920 xx=rd*COS(r1)+xx:zz=rd*SIN(r1)
930 RETURN
940 ' Moverse a (xp,yp)
950 GOSUB 480
960 xx=xx*xs: yy=yy*ys: zz=zz*zs
970 GOSUB 780: 'rotar
980 GOSUB 870: '??????
990 IF x0=-999 THEN pr$="M" ELSE pr$="D"
1000 xp=INT(yy)+cx: yp=INT(zz)
1010 GOSUB 1040
1020 RETURN
1030 'dibujar
1040 xp=xp*1.1: yp=yp+260: IF pr$="M" OR
f1=1 THEN x8=xp: y8=yp
1050 PLOT x8,y8,f1,0: DRAW xp,yp,f1,0: x
8=xp: y8=yp: x0=xp
1060 RETURN
1070 ' Color del mar
1080 f1=14: RETURN
1090 ' Color de tierra
1100 f1=3: RETURN
1110 ' Inicializar pantalla o plotter
1120 CLS: RETURN
1130 ' Salida
1140 a$=INKEY$: WHILE LEN(a$)=0: a$=INKE
Y$: WEND
1150 STOP

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