

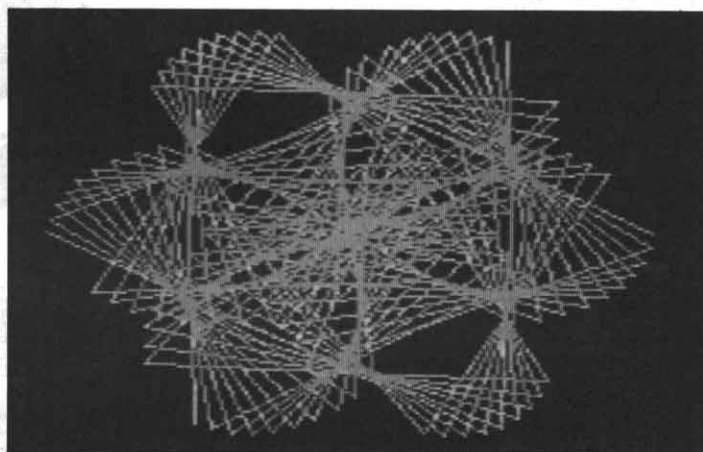
# ANIMACION

Este programa de animación te permite el tratamiento de imágenes desde sencillos menús en Basic. Puedes, incluso, salvar las imágenes creadas para su aprovechamiento posterior.

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10  ////////////
20  / INICIO /
30  ////////////
40  CLEAR 200,46195!:KEY OFF:COLOR 4
,15,4:WIDTH 35:DEFINT A,E-G,I;J,N,S
,X,Z
50  DIM BX(11),BY(11),EX(24),EY(24)
60  ////////////
70  / MENU PRINCIPAL /
80  ////////////
90  SCREEN 0
100 CLS:RESTORE 120:FOR X=1 TO 6:RE
ADA#
110 LOCATE 8,X*2+5:IF X=1 THEN PRIN
T" ";A#:LOCATE 8,X*2+6:PRINT"
" ELSE PRINTA#
120 NEXT:DATA MENU PRINCIPAL,1- ENT
RADA/SALIDA,2- REVOLUCIONAR,3- ANIM
ACION,4- EDITAR CURVA,5- INTRODUCIR
DATOS
130 A#=INKEY#:IF A#="" OR A#<"1" OR
A#>"5" THEN 130
140 ON VAL(A#) GOTO 150,830,1150,17
30,2270
150  ////////////
160  / E/S /
170  ////////////
180  COLOR 4,15:CLS
190  RESTORE 190:DATA 1- DISCO,2- CI
NTA,3- MENU
200  FOR X=1 TO 3:READ A#:LOCATE 13,
X*2+7:PRINTA#:NEXT
210  A#=INKEY#:IF A#="" OR A#<"1" OR
A#>"3" THEN 210
220  ON VAL(A#) GOTO 230,230,100
230  GOSUB 710:CLS:ON VAL(C#) GOTO 2
70,390,330,550
240  ////////////
250  / SALVAR DATOS CINTA/DISCO /
260  ////////////
270  IF N(>)0 AND F1=1 AND F2=1 AND F
3=1 AND F4=1 THEN GOSUB 790:IF VAL(
A#)=1 THEN B#=B#+".DAT"ELSE B#="CAS
:"+B# ELSE 230
280  OPEN B# FOR OUTPUT AS#1:PRINT#1
,N,R,G,S,RL,X2(0),X3(0),X2(1),X3(1)
290  FOR X=0 TO N-1:PRINT#1,BX(X),BY
(X):NEXT:CLOSE:GOTO 180
300  ////////////
310  / CARGAR DATOS CINTA/DISCO /

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320  ////////////
330  GOSUB 790:IF VAL(A#)=1 THEN B#=
B#+".DAT" ELSE B#="CAS:"+B#
340  OPEN B# FOR INPUT AS#1:INPUT#1,
N,R,G,S,RL,X2(0),X3(0),X2(1),X3(1)
350  FOR X=0 TO N-1:INPUT#1,BX(X),BY
(X):NEXT:CLOSE:F1=1:F2=1:F3=1:F4=1:
GOTO 180
360  ////////////
370  / SALVAR IMAGEN CINTA/DISCO /
380  ////////////
390  IF F5=1 THEN GOSUB 790:IF VAL(A
#)=1 THEN B#=B#+".IM" ELSE B#="CAS:
"+B#:GOTO 460 ELSE 230
400  / DISCO /
410  SCREEN 2:F=3:X=0:GOSUB 1690:GOS
UB 1490
420  U=USR4(0):GOSUB 440:U=USR5(0):G
OSUB 440:U=USR6(0):GOSUB 440:U=USR7
(0):GOSUB 440
430  SCREEN 0:GOTO 180
440  X=X+1:C#=B#+RIGHT$(STR$(X),1)
450  BSAVE C#,0,6143,S:RETURN
460  / CINTA /
470  COLOR 4,4:SCREEN 2:GOSUB 1690:R
ESTORE480
480  DATA 21,74,B4,01,00,20,11,00,00
,CD,5C,00,C9,3A,AB,D5,D3,A8,21,00,4
0,01,00,20;11,74,B4,ED,B0,3A,AA,D5,
D3,A8,C9,3A,AB,D5,D3,A8,21,00,60,01
,00,20,11,74,B4,ED,B0,3A,AA,D5,D3,A
8,C9,21,00,00,01,00,20,11,74,B4,CD,
59,00,C9
490  FOR Z4=0 TO 69:READ A#:POKE 544
00!+Z4,VAL("&H"+A#):NEXT:DEFUSR0=54

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400! :DEFUSR1=54413! :DEFUSR2=54435! :
DEFUSR3=54457!
500 U=USR0(0):U=USR1(0):GOSUB 510:U
=USR2(0):GOSUB 510:U=USR3(0):GOSUB
510:GOTO 430
510 BSAVE B#,46196!,54387!:RETURN
520 ///////////////////////////////////////////////////
530 / CARGAR IMAGEN CINTA/DISCO /
540 ///////////////////////////////////////////////////
550 GOSUB 790:IF VAL(A#)=1 THEN B#=
B#+".IM" ELSE B#="CAS:"+B#:GOTO 620
560 //**** DISCO ****//
570 SCREEN 2:F=3:X=0:GOSUB 1690:GOS
UB 1360
580 GOSUB 600:U=USR0(0):GOSUB 600:U
=USR1(0):GOSUB 600:U=USR2(0):GOSUB
600:U=USR3(0)
590 SCREEN 0:F5=1:GOTO 180
600 X=X+1:C#=B#+RIGHT$(STR$(X),1)
610 BLOAD C#,S:RETURN
620 //**** CINTA ****//
630 COLOR 4,4:SCREEN 2:GOSUB 1690:R
ESTORE 640
640 DATA 3A,AB,D5,D3,A8,21,74,B4,01
,00,20,11,00,40,ED,B0,3A,AA,D5,D3,A
8,C9,3A,AB,D5,D3,A8,21,74,B4,01,00,
20,11,00,60,ED,B0,3A,AA,D5,D3,A8,C9
650 FOR Z4=0 TO 43:READ A#:POKE 548
00!+Z4,VAL("&H"+A#):NEXT:DEFUSR0=54
800!:DEFUSR1=54822!
660 GOSUB 670:U=USR0(0):GOSUB 670:U
=USR1(0):GOSUB 670:GOTO 590
670 BLOAD B#:RETURN
680 ///////////////////////////////////////////////////
690 / MENU DE OPCIONES DE E/S /
700 ///////////////////////////////////////////////////
710 CLS:RESTORE 720
720 DATA 1- SALVAR DATOS,2- SALVAR
IMAGENES,3- CARGAR DATOS,4- CARGAR
IMAGENES,5- MENU
730 FOR X=1 TO 5:READ C#:LOCATE 8,X
*2+7:PRINTC#:NEXT
740 C#=INKEY#:IF C#="" OR C#<"1" OR
C#>"5" THEN 740
750 IF VAL(C#)=5 THEN RETURN 180 EL
SE RETURN
760 ///////////////////////////////////////////////////
770 / SUBROUTINA NOMBRE /
780 ///////////////////////////////////////////////////
790 LOCATE 3,11:PRINT"(Máximo de se
is letras)":B#="":LOCATE 3,9:INPUT"
¿NOMBRE";B#
800 IF B#="" THEN CLS:GOTO 790
810 B#=LEFT$(B#,6):LOCATE 3,13:PRIN
T"PULSA UNA TECLA"
820 C#=INKEY#:IF C#="" THEN 820 ELS
E RETURN
830 ///////////////////////////////////////////////////
840 / REVOLUCION /

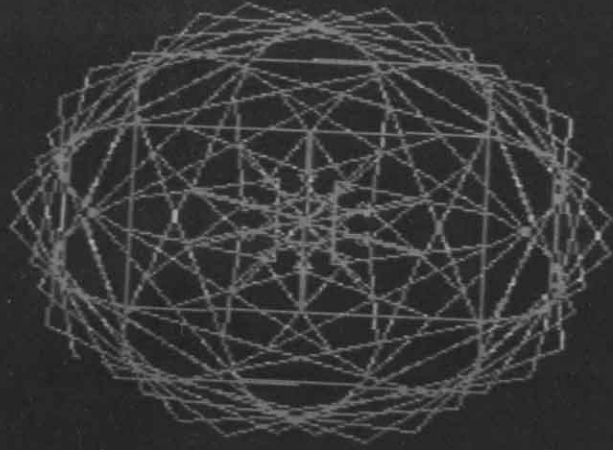
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850 ///////////////////////////////////////////////////
860 IF N=0 OR F1=0 OR F2=0 OR F3=0
OR F4=0 THEN 130
870 F=2
880 SCREEN 2
890 FOR T=0 TO 1 STEP R:T3=0:T4=0
900 GOSUB 2130
910 GOSUB 950
920 NEXT T
930 PLAY"07L6C"
940 IF STRIG(0) THEN 90 ELSE 940
950 A0=X2(1)-X2(0):A1=X3(1)-X3(0):A
2=X3(0)*A0-X2(0)*A1:T5=A1*T4+A0*T3:
IF A0<>0 THEN T6=(A2+(A1*T5/A0))/(A
0+(A1*A1/A0)):T7=(T5-A1*T6)/A0 ELSE
T7=X2(0):T6=T5/A1
960 T8=SQR((T3-T7)^2+(T4-T6)^2)
970 IF A0<>0 AND T8<>0 THEN T9=(T3-
T7)/T8:T0=-ATN(T9/SQR(-T9*T9+1))+1.
5708 ELSE T0=0
980 PI=3.141592654#:B=0:P1=.2617993
88#
990 IF G=1 THEN P2=0:P3=2*PI+.1
1000 IF G=2 THEN IF S=1 THEN P2=0:P
3=3*PI/2 ELSE P2=PI/2:P3=2*PI
1010 IF G=3 THEN IF S=1 THEN P2=0:P
3=PI ELSE P2=PI:P3=2*PI
1020 IF G=4 THEN IF S=1 THEN P2=0:P
3=PI/2 ELSE P2=3*PI/2:P3=2*PI
1030 P5=E1*.065449846#
1040 IF G=1 THEN P2=P2+P5:P3=P3+P5
1050 FOR P6=P2 TO P3 STEP P1
1060 IF P6=P2+P1ANDP5<>0ANDG<>1THEN
P6=P2+P5
1070 H0=T8*COS(P6):H1=T8*RL*SIN(P6)
:H2=H0*COS(T0)-H1*SIN(T0):H3=H0*SIN
(T0)+H1*COS(T0)
1080 IF P6=P2 THEN IF T4-T6<0 THEN
PSET (H2+T7,T6-H3) ELSE PSET (H2+T7
,T6+H3) ELSE IF T4-T6<0 THEN LINE-(
H2+T7,T6-H3) ELSE LINE-(H2+T7,T6+H3
)
1090 IF T=0 THEN EX(B)=H2+T7:IF T4-
T6<0 THEN EY(B)=T6-H3 ELSE EY(B)=T6
+H3 ELSE PSET(EX(B),EY(B)):EX(B)=H2
+T7:IF T4-T6<0 THEN LINE-(H2+T7,T6-
H3):EY(B)=T6-H3 ELSE LINE-(H2+T7,T6
+H3):EY(B)=T6+H3
1100 B=B+1
1110 IF P6=P3AND G<>1 THEN 1130
1120 IF P6+P1>P3 AND G<>1THEN P6=P3
-P1
1130 NEXT
1140 RETURN
1150 ///////////////////////////////////////////////////
1160 / ANIMACION /
1170 ///////////////////////////////////////////////////
1180 F=2:IF (N<>0 AND F1=1 AND F2=1
AND F3=1 AND F4=1) OR F5=1 THEN 11

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1880 RESTORE 1880:DATA 8,8,8,127,8,
8,8,0
1890 A$="":FOR X=1 TO 8:READ E:A$=A
$+CHR$(E):NEXT:SPRITE$(0)=A$
1900 PUT SPRITE 0,(121,87),4,0:B=0:
I=0:J=0:IF F=1 THEN RETURN
1910 *****
1920 / MOVI. SPRITE /
1930 *****
1940 E=STICK(0)
1950 IF E/2=INT(E/2) THEN 2000
1960 IF E=1 AND I>-91 THEN I=I-1:GO
TO 2040
1970 IF E=5 AND I<100 THEN I=I+1:GO
TO 2040
1980 IF E=3 AND J<129 THEN J=J+1:GO
TO 2040
1990 IF E=7 AND J>-124 THEN J=J-1:G
OTO 2040
2000 IF E=2 AND I>-91 AND J<129 THE
N I=I-1:J=J+1:GOTO 2040
2010 IF E=6 AND J>-124 AND I<100 TH
EN J=J-1:I=I+1:GOTO 2040
2020 IF E=4 AND I<100 AND J<129 THE
N I=I+1:J=J+1:GOTO 2040
2030 IF E=8 AND J>-124 AND I>-91 TH
EN J=J-1:I=I-1
2040 PUT SPRITE 0,(121+J,87+I),4,0
2050 IF STRIG(0) THEN IF F=0 THEN 2
070 ELSE RETURN
2060 GOTO 1940
2070 FOR X=1 TO 250:NEXT:PSET (125+
J,91+I),4:BX(B)=125+J:BY(B)=91+I:B=
B+1:IF B=N THEN 2110 ELSE 1940
2080 *****
2090 / DIBUJO CURVA BEZIER /
2100 *****
2110 FOR T=0 TO 1 STEP R:T3=0:T4=0
2120 IF T=0 THEN PSET (BX(0),BY(0))

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:GOTO 2200
2130 FOR X=1 TO N:GOSUB 2150:T2=(1-
T)^(N-X)*T^(X-1)*T1:T3=T3+BX(X-1)*T
2:T4=T4+BY(X-1)*T2:NEXT X
2140 IF F=2 THEN RETURN ELSE LINE -
(T3,T4):GOTO 2200
2150 B1=1:B2=1:B3=1:B4=N-1:IF B4<>0
THEN FOR X1=1 TO B4:B1=X1*B1:NEXT
2160 B5=X-1:IF B5<>0 THEN FOR X1=1
TO B5:B2=X1*B2:NEXT
2170 B6=B4-B5:IF B6<>0 THEN FOR X1=
1 TO B6:B3=X1*B3:NEXT
2180 T1=B1/(B2*B3)
2190 RETURN
2200 NEXT T
2210 PLAY"07L6C"
2220 IF F=1 THEN RETURN ELSE PUT SP
RITE 0,(0;0),0,0
2230 A$=INKEY$:IF A$="" THEN 2230
2240 IF A$="B" OR A$="b" THEN SCREE
N 0:GOTO 1760
2250 IF A$=CHR$(13) THEN 90
2260 GOTO 2230
2270 *****
2280 / INTRO DAT /
2290 *****
2300 IF N<>0 THEN CLS ELSE 130
2310 RESTORE 2320
2320 DATA 1- ANGULO,2- SENTIDO,3- E
JE DE GIRO,4- ELIPSE,5- MENU
2330 FOR X=1 TO 5:READ A$:LOCATE 10
,X*2+7:PRINTA$:NEXT
2340 A$=INKEY$:IF A$="" THEN 2340
2350 IF A$<"1" OR A$>"5" THEN 2340
2360 ON VAL(A$) GOTO 2380,2460,2540
,2630,100
2370 ***** ANGULO *****
2380 CLS:RESTORE 2390
2390 DATA 1- 360°,2- 270°,3- 180°,4
- 90°
2400 FOR X=1 TO 4:READ A$:LOCATE 13
,X*2+7:PRINTA$:NEXT
2410 A$=INKEY$:IF A$="" THEN 2410
2420 IF A$<"1" OR A$>"4" THEN 2410
2430 G=VAL(A$):F1=1
2440 GOTO 2300
2450 ***** SENTIDO *****
2460 CLS:RESTORE 2470
2470 DATA 1- AGUJAS DEL RELOJ,2- EN
CONTRA
2480 FOR X=1 TO 2:READ A$:LOCATE 8,
X*2+7:PRINTA$:NEXT
2490 A$=INKEY$:IF A$="" THEN 2490
2500 IF A$<"1" OR A$>"2" THEN 2490
2510 IF A$="1" THEN S=1 ELSE S=2
2520 F2=1:GOTO 2300
2530 ***** EJE DE GIRO *****
2540 F=1:SCREEN 2,2
2550 GOSUB 2110

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