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10 RANDOMIZE TIME:MODE 2:DEG:ORIGIN 3
20,200:f=RND/2+.5:r=2*CINT(RND*50)+9
0:w=2*CINT(RND*34)+20:r1=w*190/r:MOVE
  190-r1+f*r1,0:DIM a(2):a(1)=r:a(2)=w
20 WHILE a(1)*a(2)<>0:z1=MIN(a(1),a(2)):z2=MAX(a(1),a(2)):z2=z2 MOD z1:a(1)=z1:a(2)=z2:WEND
30 hcf=MAX(z1,z2):k=360*w/hcf:pt=r/hcf:f1=f*r1:dr=190-r1:CLS:LOCATE 1,1:PRINT"Press a key if you want to abort & start a new pattern":LOCATE 1,3:PRINT pt;" points"
40 FOR j=0 TO k STEP 8
50 a=2*f1*dr*COS((190*j/r1)MOD 360):b=f1*f1:c=dr*dr:v=SQR(a+b+c)
60 d=dr*SIN(j MOD 360):u=((190/r1-1)*j)MOD 360:e=f1*SIN(u):p=dr*COS(j MOD 360):g=f1*COS(u):h=(d-e)/(p+g)
70 q=ATN(h):IF (p+g)<0 THEN q=q+180
80 x=v*COS(q):y=v*SIN(q):DRAW x,y:IF INKEY$<>" THEN ERASE a:GOTO 10
90 NEXT
100 LOCATE 1,23:PRINT "FINISHED":PRINT CHR$(7):PRINT "Press a key to start a new pattern":WHILE INKEY$="":WEND:ERASE a:GOTO 10

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