

```

5 cls
10 graphics 0
20 input "a = ";a : input "b = ";b
30 for y = 90 to 410 step 0.4
40 for x = 70 to 430 step 0.4
45 REM axis and scale
50 p = (x-250)/120
60 q = (y-250)/120
70 n = 0
80 n = n+1
90 r = (p*p)-(q*q)+a
100 s = (2*p*q)+b
110 p = r
120 q = s
125 REM n iterations
130 if n < 20 and (p*p)+(q*q) < 500 then goto 80
140 c = (p*p)+(q*q)
150 if c < 4 then graphics pset x,y
155 REM colours
160 if c > 4 and c < 5000 then graphics color 100,0,0 :
graphics pset x,y
170 if c < 50000 and c > 5000 then graphics color 0,100,0 :
graphics pset x,y
180 if c < 100000 and c > 50000 then graphics color 0,0,100
: graphics pset x,y
190 graphics color 0,0,0
200 next x
210 next y

```