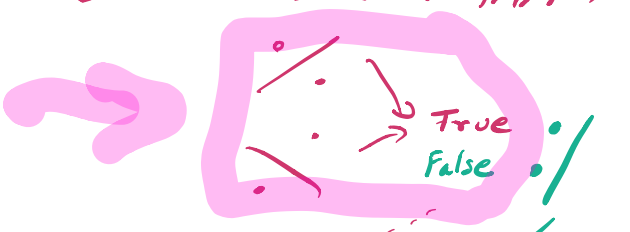
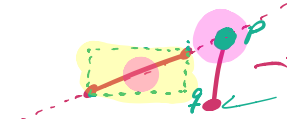
Instalación de IDE

def interseccion(p,q,r,s):





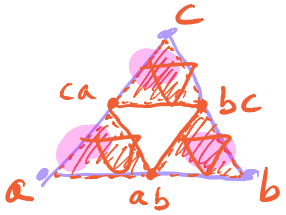
p_en_rectangulo = on_segment(p)

on_segment "sobre el segmento"

q_en_rectangulo = on_segment(q)

return p_en_rectangulo or q_en_rectangulo

Sierpinsky_biseccion.py



P_i ([[a,b,c]])

P_i ([[a,ab,ca], [b,bc,ab], [c,ca,bc]])

[[, ,], [, ,], [, ,], [, ,], [, ,], [, ,], [, ,], [, ,], [, ,]]

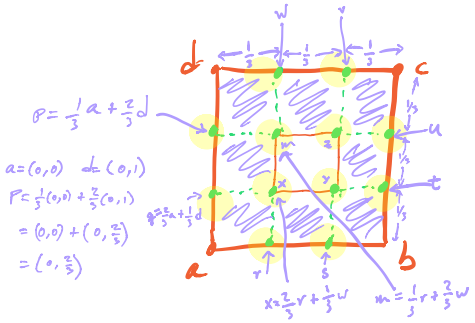
Estructura de Datos

$h^2 = x^2 + y^2$

$y = \sqrt{h^2 - x^2} = \sqrt{1 - \frac{1}{4}}$

$= \sqrt{\frac{3}{4}}$

$= \frac{\sqrt{3}}{2}$



p_i ([[a, b, c, d]])

[[, , ,]
[, , ,]
[, ,]
[, ,]
[, ,]
[, ,]
[, ,]
[, ,]]

de Δs en el paso n

n	Δs
0	1
1	3
2	9
3	27
4	81
5	243
6	729
7	2187

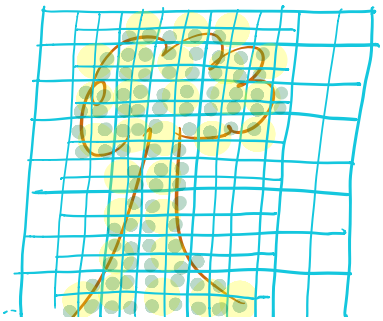
$\frac{3^n}{2} - \frac{1}{2} = \frac{1}{2}(3^n - 1)$

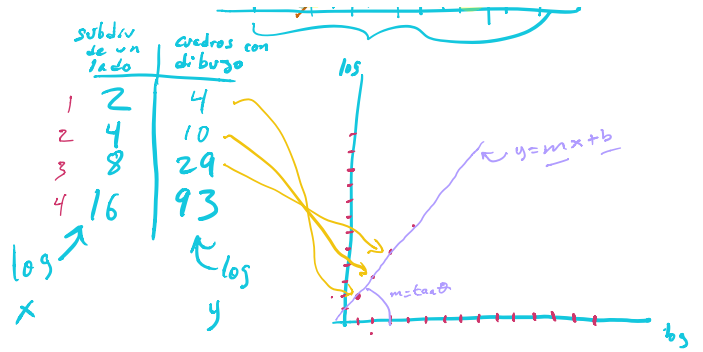
n	paty
0	0
1	1
2	4
3	13
4	40
5	121

de huecos

n	paty	Δs
0	0	1
1	1	3
2	1+3=4	9
3	4+9=13	27
4	13+27=40	81

Dimensión fractal por cajas (conteo de cajas)





$$\log_2 10 = \frac{\log_{10} 10}{\log_{10} 2} = \frac{1}{.3010} = 3.321928$$

Cálculo de recta (por mínimos cuadrados)

$\log_2 29 = 4.85798$

$\log_2 93 = 6.539158$

np.linalg.polyfit( )

aprox. poligonal a lista de ptos.

m

dim. fractal por cajas!!!