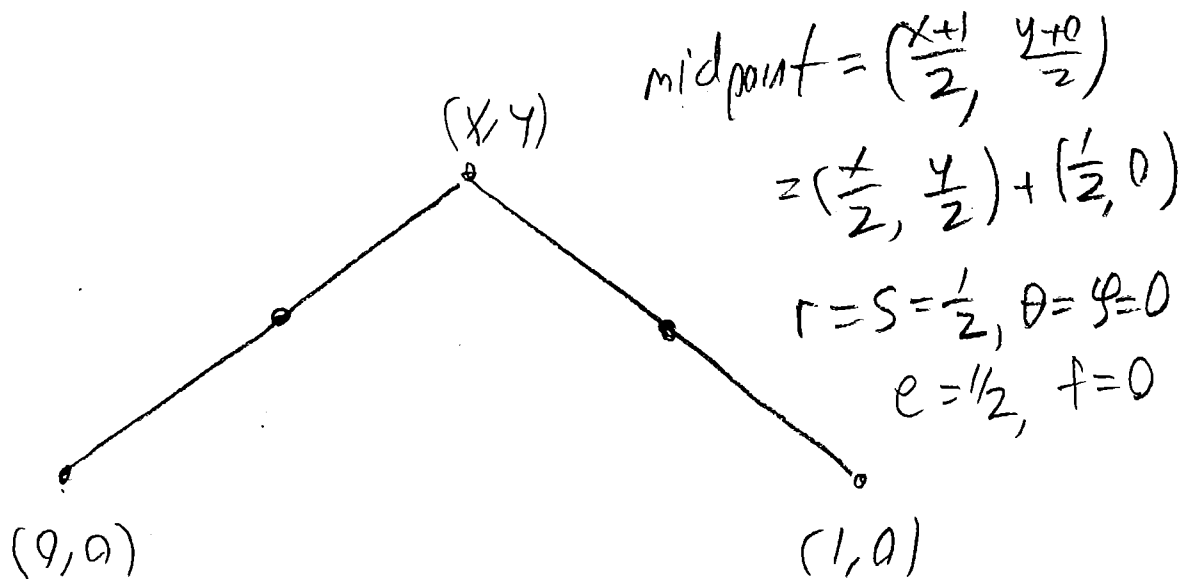


$$\left(\frac{1}{2}, 1\right)$$

Sept 15 Notes ^①



$$\text{midpoint} = \left(\frac{x+0}{2}, \frac{y+0}{2}\right)$$

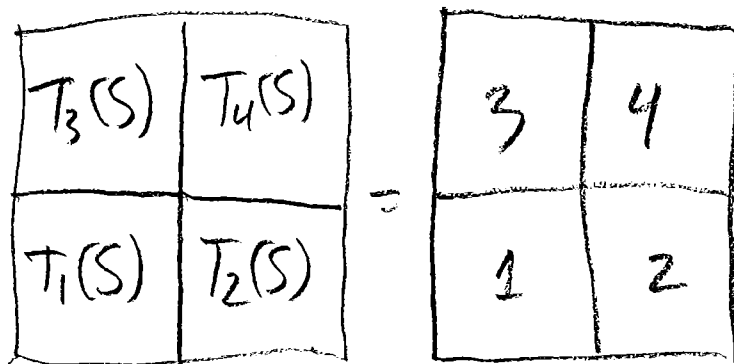
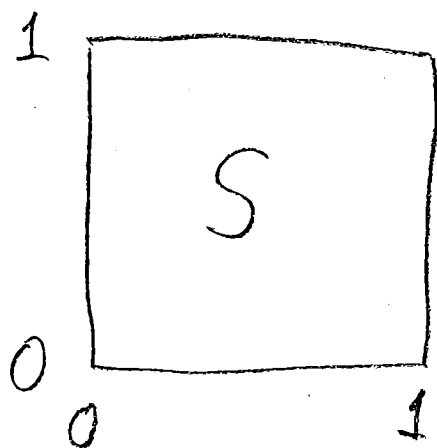
$$= \left(\frac{x}{2}, \frac{y}{2}\right) \quad r = s = \frac{1}{2}, \theta = \phi = 0, e = f = 0$$

A random sequence of infinite length must contain all finite sequences.

Addresses - use this IFS

	r	s	t	u	e	f
1	.5	.5	0	0	0	0
2	.5	.5	0	0	.5	0
3	.5	.5	0	0	0	.5
4	.5	.5	0	0	.5	.5

IFS for the filled-in square

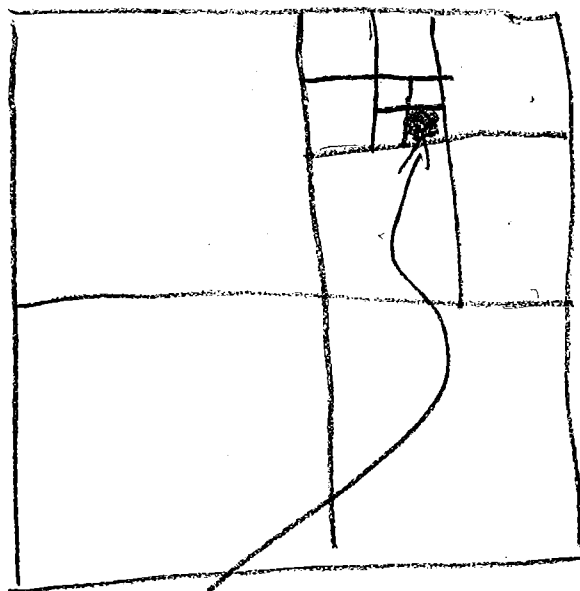


length 1 addresses of the square

3

33	34	43	44
31	32	41	42
13	14	23	24
11	12	21	22

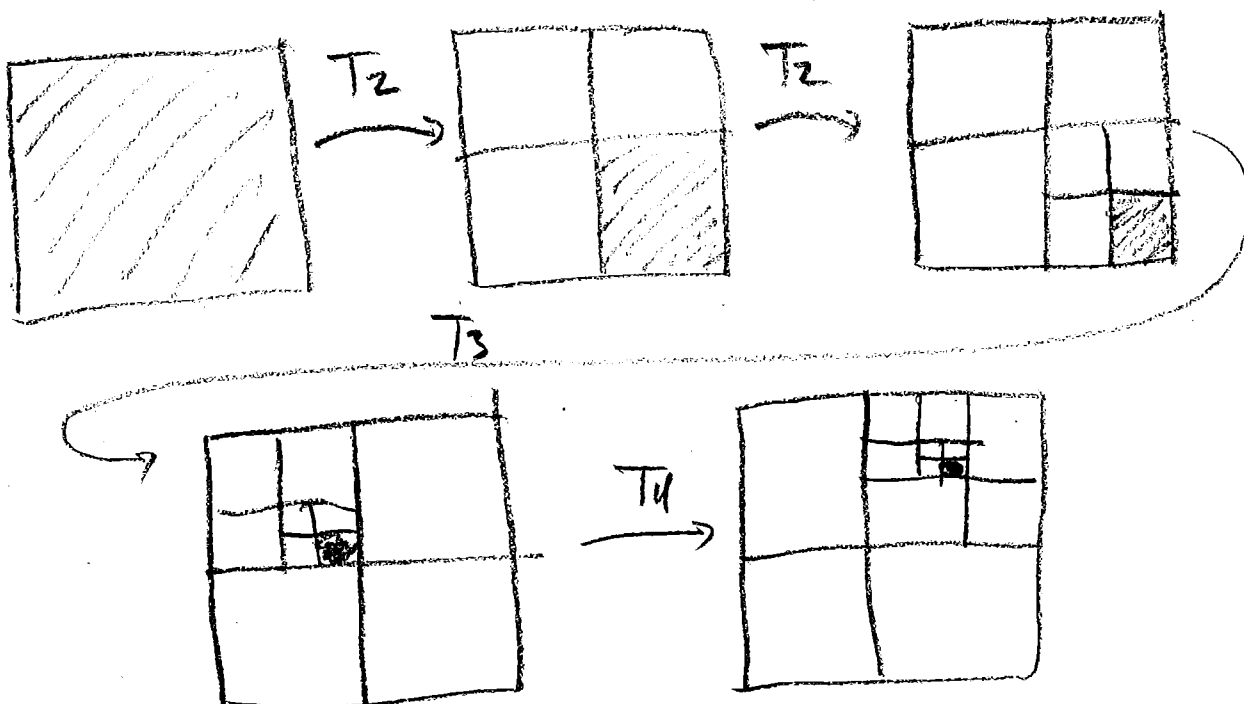
"2 part of 4)
length 2 addresses

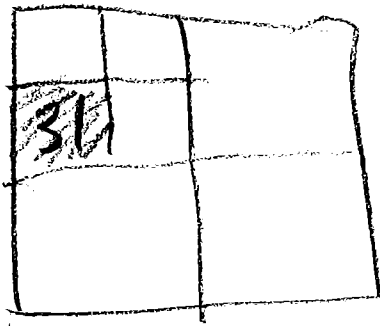


4322

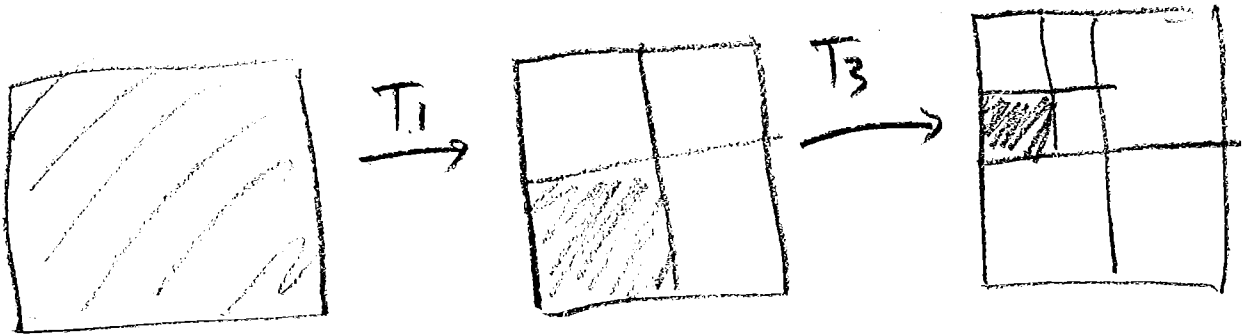
This is the order
of composition of
the transformations

$$T_4(T_3(T_2(T_2(S))))$$

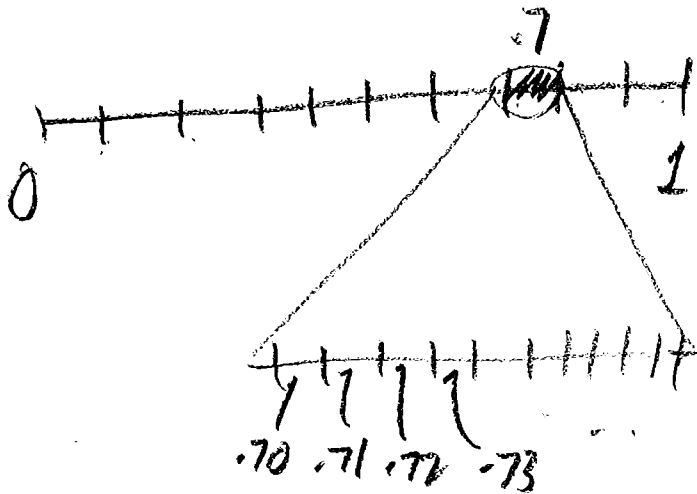




Apply T_1 , then apply T_3
 T_3 follows T_1

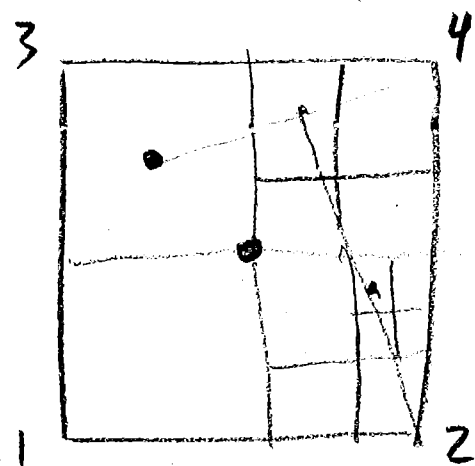


decimals



⑤

How does the random IFS algorithm fill the square



Address

3

43

243

4243

14243

314243 ...

random means eventually all 16 length 2 addresses will begin the address of the point

All length 3 addresses will be visited eventually, and all length 4, and all length 5, ...