All empty squares are consequences of forbidden pairs

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

33			
	32		
13		23	
11	12		22
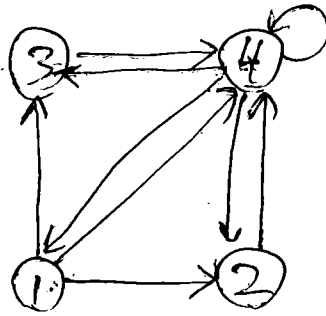
romes?
4 is a rome:
arrows go from
all 4 circles to 4.
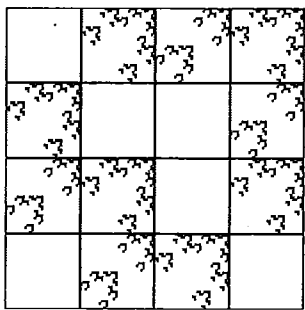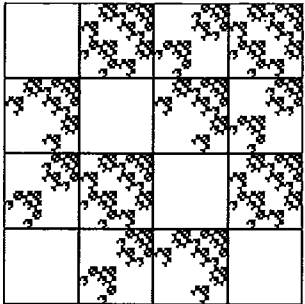
Path from a rome to each non-rome?
Yes: $4 \to 1$, $4 \to 2$ and $4 \to 3$
(paths can have length greater than 1)
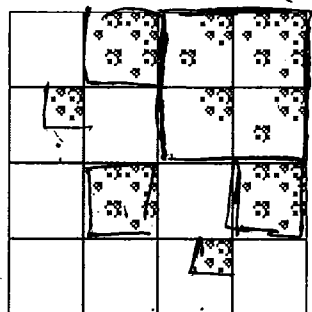Any loops among non-romes?
The only non-rome paths are $1 \to 2$ and $1 \to 3$
We can generate this IFS image
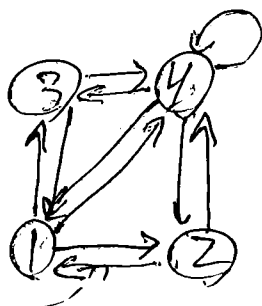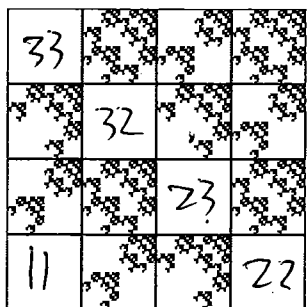without memory

1

Because 4 is a rome, this is a copy of the whole shape, scaled by 1/2

r	s	θ	φ	e	f	
1/2	1/2	0	0	1/2	1/2	
1/4	1/4	0	0	1/4	1/4	$T_1(T_4)$
1/4	1/4	0	0	3/4	1/4	$T_2(T_4)$
1/4	1/4	0	0	1/4	3/4	$T_3(T_4)$
1/8	1/8	0	0	5/8	1/8	$T_2(T_1(T_4))$
1/8	1/8	0	0	1/8	5/8	$T_3(T_1(T_4))$

4 is a rome

Arrows from rome to each non-rome:
4→1, 4→2, 4→3

1 ⇄ 2   1 ⇄ 3

Loops among non-romes

no rome.

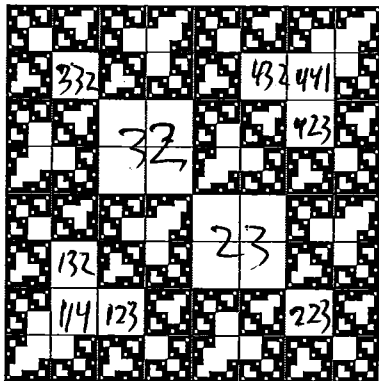No IFS without memory (all combinations allowed) and a finite number of transformations
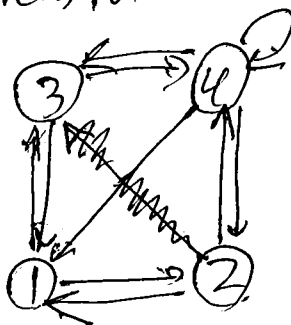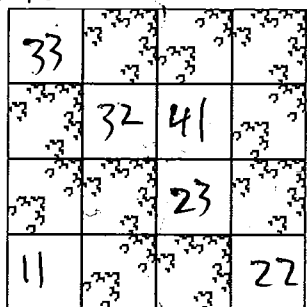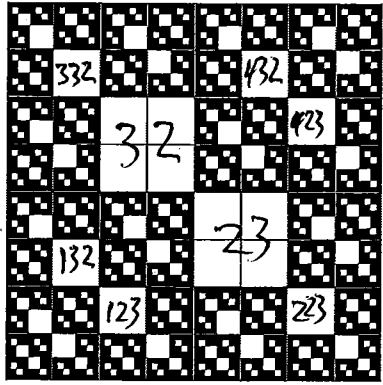
empty length 2 addresses
are 23 and 32.
empty length 3 addresses are
132   123   223   332
432   423
each empty length 3 address
contains a 23 or a 32.

To the level of length 3 addresses, every
empty address ~~and~~ contains an empty
length 2 address

empty length 2 addresses
are 23 and 32
empty length 3 addresses
are 123, 132, 223, ~~332~~ 332
432, 423, 114, 441

Does every empty length 3 address contain
an empty length 2 address?
No: 114 and 441 contain neither 23 nor 32.
This IPS is not determined by forbidden
pairs.