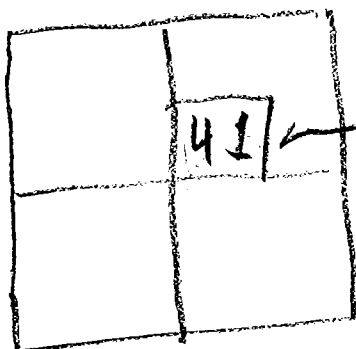
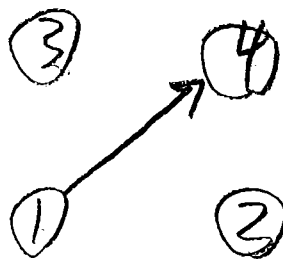
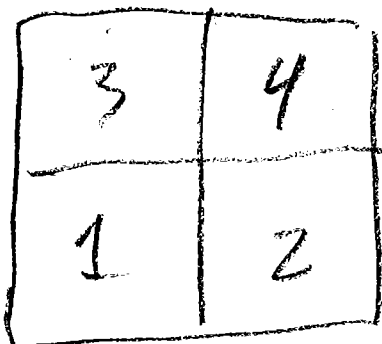


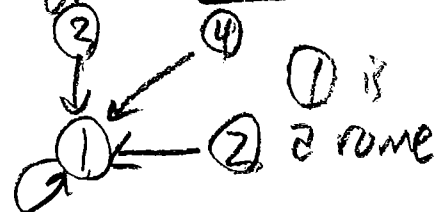
Sept 22 Review



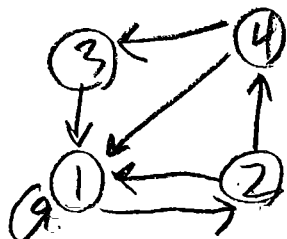
This arrow means 4 follows 1
So address 41 is occupied.

Lanski's Theorem: An IFS with memory (allowed or forbidden pairs) can be produced without memory (regular IFS) if

(1) There is at least one same



(2) For every path from a



non-same, there is 2 same to the non-same

① is a same

②, ③, and ④ are non-sames

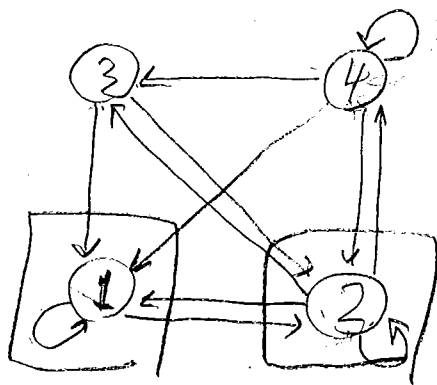
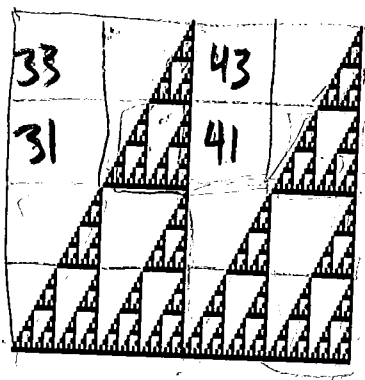
① → ②

① → ② → ④

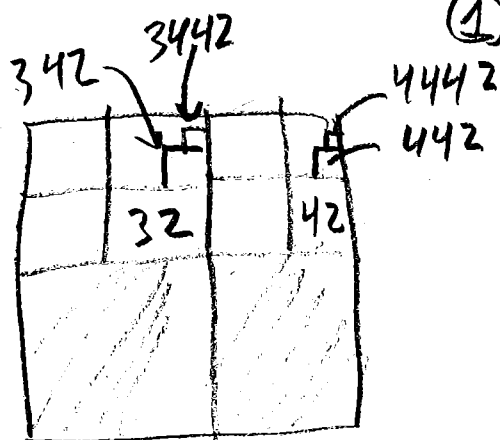
① → ② → ④ → ③

1 copy scaled by $1/2$ (same)
 1 copy scaled by $1/4$ (① → ②)
 1 copy scaled by $1/8$ (① → ② → ④)
 1 copy scaled by $1/16$ (① → ② → ~~④~~ → ③)

To be guaranteed we need only
 a finite number of transformations,
 (3) There is no loop among non-romes

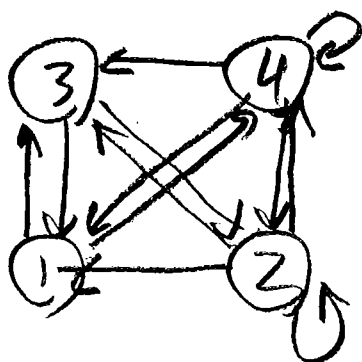


① and ② are *romes*



Here ④ is a loop
through non-romes -
so infinitely many rules to
draw this double gasket by IFS
without memory.

33		43	
11		21	



No romes

This cannot be produced by IFS
without memory.