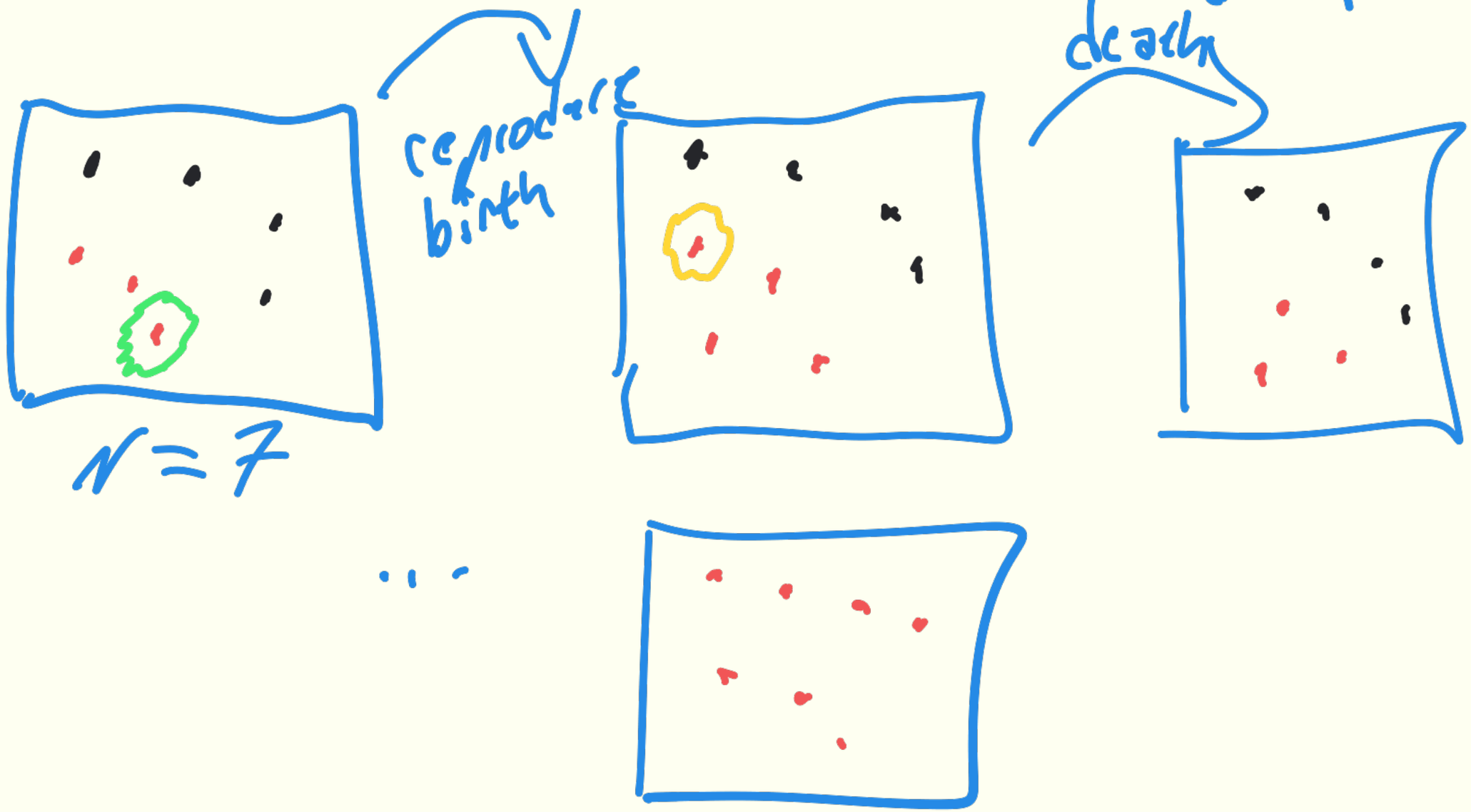
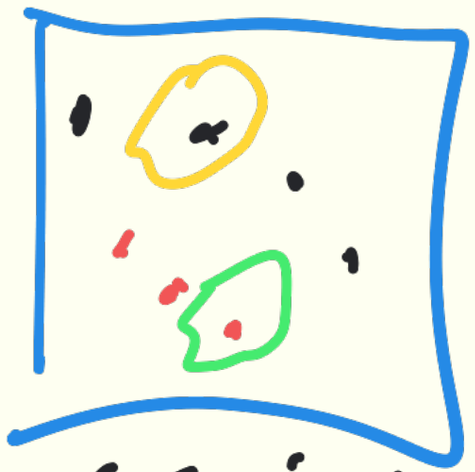
Moran Process with neutral drift



$$N \quad 0 \le i \le N$$



$N=7,\ i=4$

$$p_{ii-1} = \frac{i}{N}\,\frac{N-i}{N} = \frac{i(N-i)}{N^2}$$

$$p_{ii+1} = \frac{i}{N}\,\frac{N-i}{N} = \frac{i(N-i)}{N^2}$$

$$p_{ii} = 1 - p_{ii-1} - p_{ii+1}$$

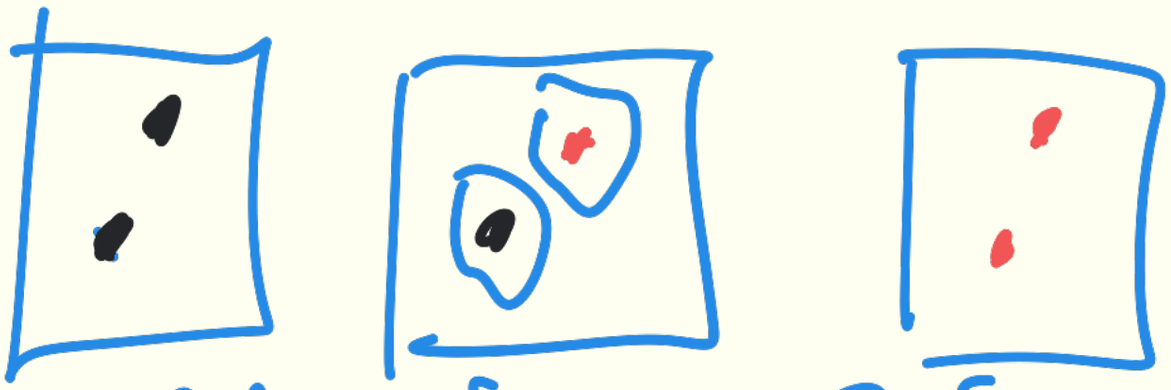
$$p_{00} = 1 \qquad p_{0i} = 0 \quad \forall\, i > 0$$

$$p_{NN} = 1 \qquad p_{Ni} = 0 \quad \forall\, N > i$$

$N=2$

foo

	0	1	2
0	1	0	0
1	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{4}$
2	0	0	1



$$p_{i\,i+1} = \frac{i(N-i)}{N^2}$$

$$= \frac{1 \cdot 1}{4}$$

$p_{i\,i-1}$