

$$f_{1i} = \frac{a(i-1) + b(N-i)}{N-1}$$

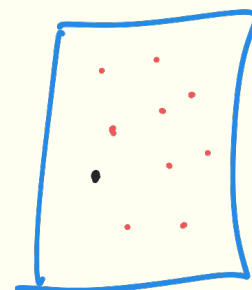
$$f_{2i} = \frac{c i + b(N-i-1)}{N-1}$$

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

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

$$\gamma_i = \frac{p_{i+1}}{p_{i-1}} = \frac{f_{1i}}{f_{2i}}$$

$$x_i = \frac{1 + \sum_{j=1}^{i-1} \prod_{k=1}^j \frac{f_{1k}}{f_{2k}}}{1 + \sum_{j=1}^{N-1} \prod_{k=1}^j \frac{f_{1k}}{f_{2k}}}$$



$$p_1 = x_1$$

$$p_2 = 1 - x_{N-1}$$