

Simulating Gene Sequence Evolution

i/j	a	t	g	c
a	$1 - 2\alpha - \beta$	α	β	α
t	α	$1 - 2\alpha - \beta$	α	β
g	β	α	$1 - 2\alpha - \beta$	α
c	α	β	α	$1 - 2\alpha - \beta$

- m_{ij} is the probability of $i \rightarrow j$
- α is the probability of purine to purine
- β is the probability of pyrimidine to pyrimidine

!fig2

$$f(x) = \sum_{i \neq j} m_{ij}$$

$$g(x) = \sum_{i=j} m_{ij}$$

