

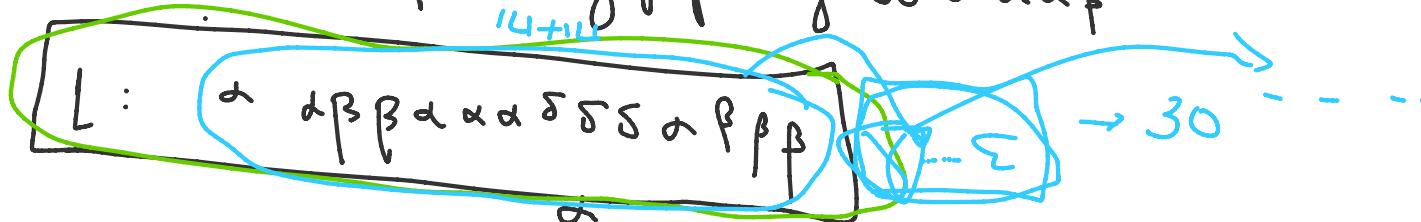
$$\frac{P(\varphi | \phi)}{P(1 | 1)}$$



$$\varphi = \alpha, \beta, \gamma, \delta, \varepsilon$$

$$X \sim P(\phi | \varphi) > P(1 | \varphi) \Rightarrow \varphi \in \phi$$

ϕ : $\alpha \alpha \alpha \beta \beta \alpha \alpha \gamma \gamma \gamma \alpha \alpha \gamma \alpha \delta \delta \alpha \alpha \beta$



$$P(\varphi | \phi)$$

	α	β	γ	δ	ε
	10	3	4	2	4

$$\frac{10}{19+4} \quad \frac{3}{19+4} \quad \frac{4}{19+4} \quad \frac{2}{19+4} \quad \frac{4}{19+4}$$

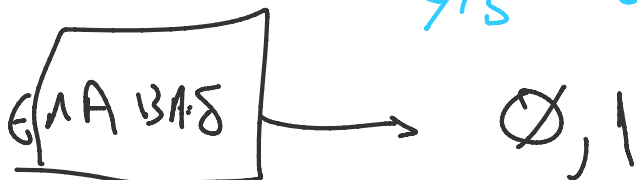
$$P(\varphi | \psi)$$

	α	β	ϕ	γ	ε
	6	5	ϕ	3	15

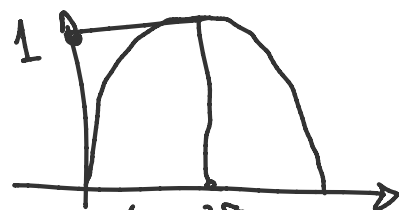
$$\frac{12}{30} \quad \frac{10}{30} \quad \frac{1}{30} \quad \frac{4}{30} \quad \frac{1}{30}$$

$$\frac{6}{14} \quad \frac{5}{14} \quad \phi \quad \frac{3}{14} \quad \frac{1}{30} = L$$

$$\frac{6}{15} \quad \frac{5}{15} \quad \frac{1}{15} \quad \frac{3}{15}$$

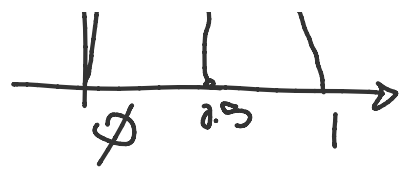


$$P(\phi | \gamma \delta) > P(1 | \gamma \delta)$$



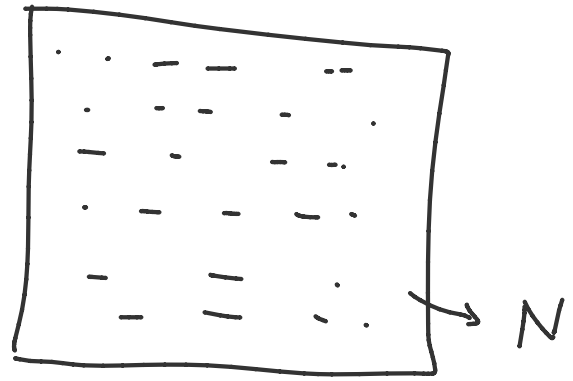
$$P(\emptyset | \emptyset) > P(1 | \emptyset)$$

$$P(\emptyset | \emptyset) > P(1 | \emptyset) \Rightarrow$$

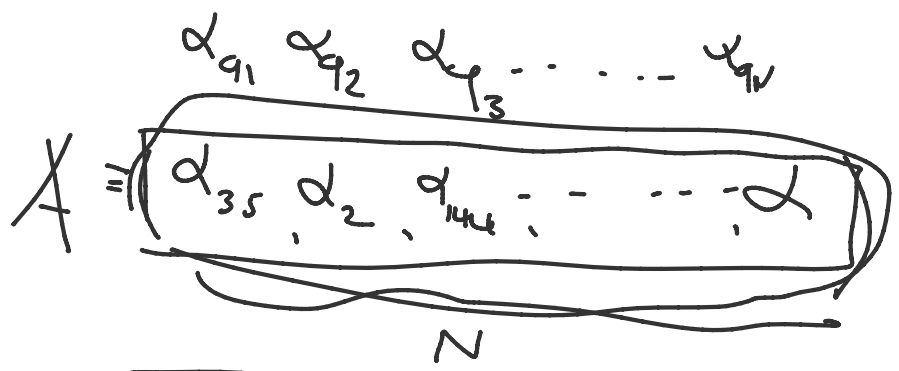


$$\Rightarrow \frac{P(\emptyset | \emptyset) \cdot P(\emptyset)}{P(\emptyset)} > \frac{P(1 | \emptyset) \cdot P(1)}{P(\emptyset)}$$

$$\Rightarrow \Delta \rightarrow \perp$$



500 α_i $i=1, 500$



$$P(L_m | X)$$

$m=1, M$

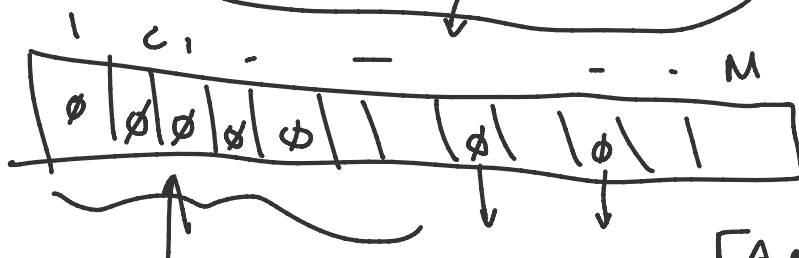
$$P(A | L_m) \cdot P(L_m)$$



$$\alpha_{\text{symmax}} \frac{P(A/L_m) \cdot P(L_m)}{P(A)} = \alpha_{\text{symmax}} \underbrace{P(A/L_m)}_{L_m} \cdot \underbrace{P(L_m)}$$

$$P(\underbrace{\alpha_{q_1} \dots \alpha_{q_N}}_{100} / L_m) = \prod_{i=1}^N P(\alpha_{q_i} / L_m)$$

$$P(\alpha_{q_i} / L_m)$$



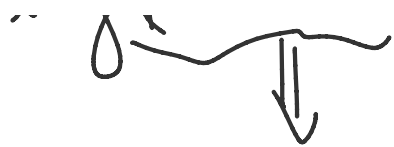
1) ΑΝ. ΧΑΡΑΚ.	ΑΡ. ΕΥΜΒ ~100	ΑΡ. ΓΛΩ. ~100 + ΑΡ. ΓΛ.
2) ΑΝ. ΚΕΣΗ.	~1000	~10.000 + -1-

$$\frac{1/100}{1000 \cdot 200}$$

T(500)

$$P(L_i | T) \Rightarrow P(L_j | T) \Rightarrow$$

$$\log \underbrace{P(T|L_i) P(L_i)}_{\downarrow} > \log (P(T|L_j) P(L_j))$$



$$P(t_1, t_2, \dots, t_{500} | L_i) =$$

$$\prod_{q=1}^{500} P(t_q | L_i) \approx \left(\frac{1}{100}\right)^{500} = (10^{-2})^{500} = 10^{-1000} \rightarrow \emptyset$$

$$\log \prod P = \sum_{q=1}^{500} \log P(t_q | L_i)$$

$$= - \sum \log \frac{1}{P(t_q | L_i)} \Rightarrow$$

$$\rightarrow - \left(\sum_q \log \left(\frac{1}{P(t_q | L_i)} \right) \right)_{\log} - \sum_q \log \frac{1}{P(t_q | L_i)}$$

$$- \log P(L_i)^{-1}$$

$$\sum_q \log \frac{1}{P(t_q | L_i)} + \log \frac{1}{P(L_i)}$$

$$\log_{10} 100 = 2$$

$$\log_{10} 1000000 = 6$$