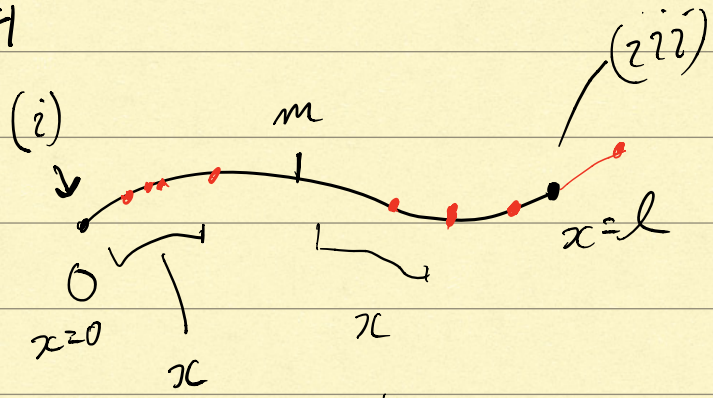
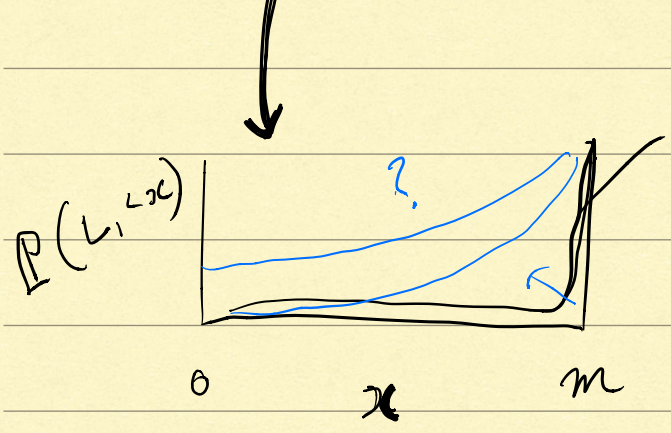
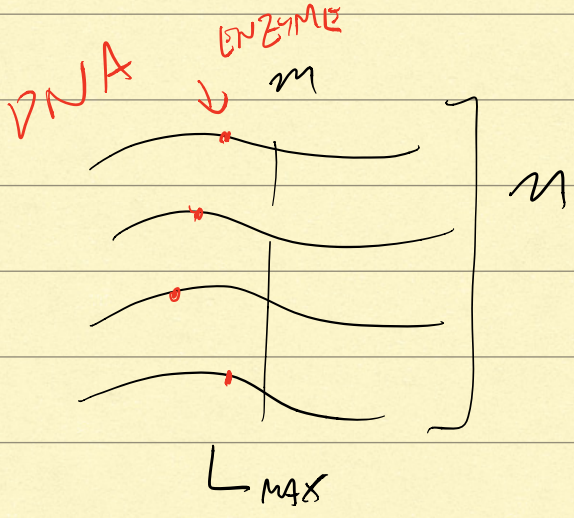
PS4





AS $\lambda \to \infty$

$$\mathbb{P}(L_1 \leq x) = \begin{cases} 0 & 0 < x < m \\ 1 & x = m \end{cases}$$



$$\mathbb{P}(L_{MAX} < x)$$

$$= \mathbb{P}(L_1 < x \text{ AND } L_2 < x \text{ AND } \ldots L_n < x)$$

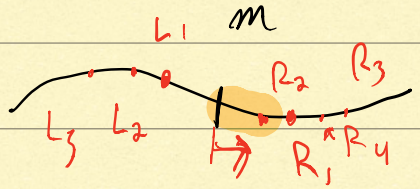
METHOD 1

INDEPENDENT

$$= \mathbb{P}(L_1 < x) \cdot \mathbb{P}(L_2 < x) \cdots \mathbb{P}(L_n < x)$$

IDENTICALLY DISTRIBUTED $= \left(P(L_1 < x) \right)^n$

METHOD 2



$\rightarrow$ n POISSON WITH RATE λ

$\min(R_i)$ 1 POISSON WITH RATE $n\lambda$