1. 言登日A Comparison - based Sorting Algorithm 的 lower bound 為 A (nlgn)

設下為input size 為n 对应的 decision tree , : 共有n!个排列方法:Thi leaf node)至少為n!个

 $\Rightarrow h! \leq 2^h \Rightarrow h \geq \lg n! = \ell(n \lg n)$

: tt較次數至少為 nlg n #

2. TINI= TI 1/3/+ T/3/n/+h

: Tinl = O(nlgn)

3. T'(n) = aT(2)+n2 = 01 max (log4 a, n2)) if a = 16

又TIN=7TI=1+n2

= 01 log 27)

: log 4 a < log 2 7

log = JA < log = 7 7 5ac7 7 ac49.