LimiteInf-Sorting

Thursday, 7 March 2019 10:31

LIMITE INFERIORE AL

BASATO SU CONFRO

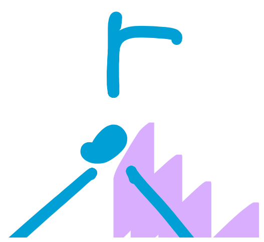
\# possibili so

A) AdD $\geq n!$ foglie

B) AdD binario

$\leq$

LIMITE INFERIORE dell'e



ELL'ORDINAMENTO
NTI

luzioni : n!

e

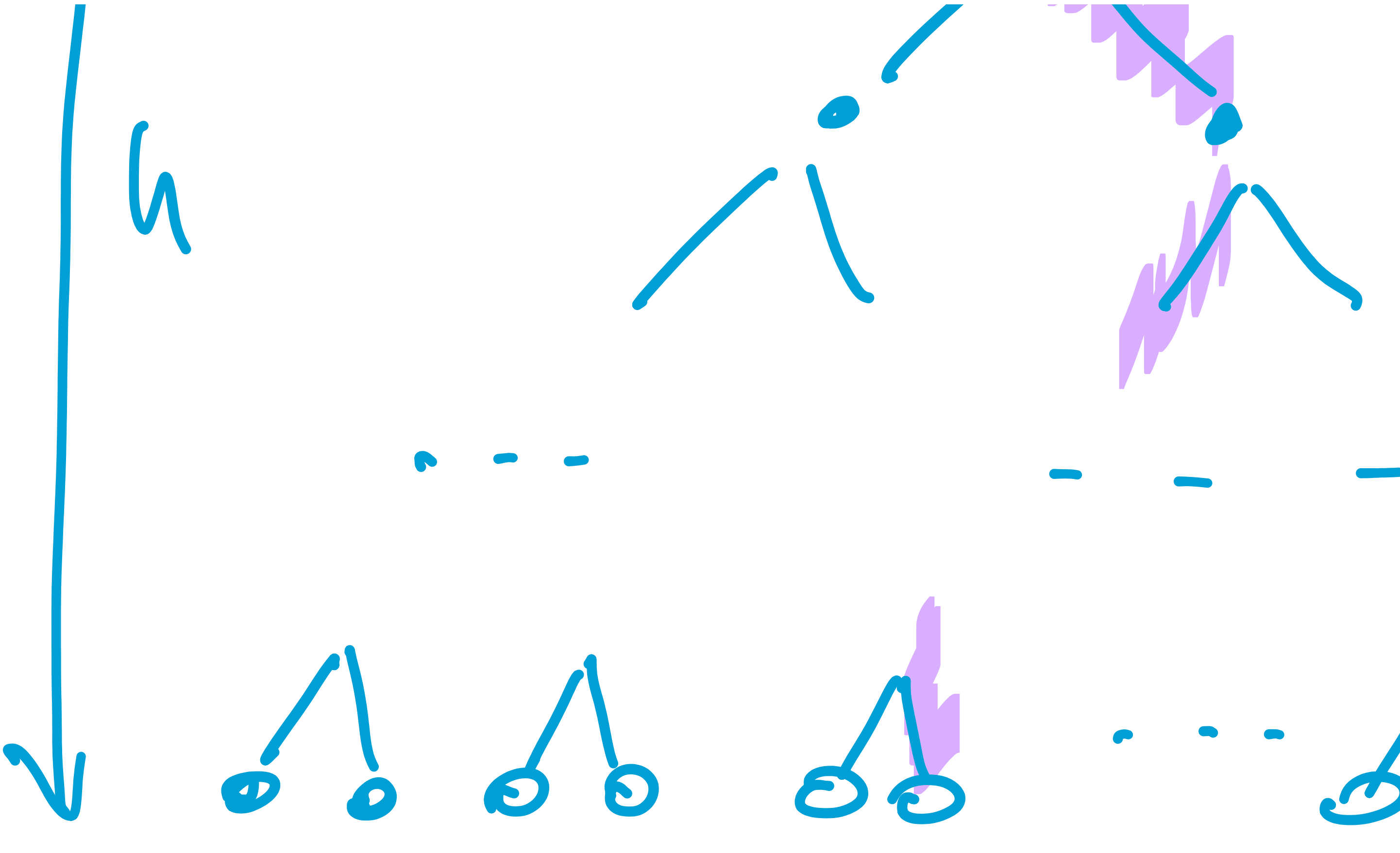
i : j

/ \

>

altezza di tale Albero

o foglie



$L(n) = \Omega(\log_2(S(n$

$\log_2(n!)$

$\boxed{h \geq \log}$

$2^h \geq n$

 $\geq u!$

$(u!))$ $S(u) = u!$

$ee_2(u!)] \neq$

!

$$n! = \underbrace{n(n-1)(n-2)\ldots\left(\tfrac{n}{2}\right)\ldots}_{\geq \frac{n}{2}}$$

$$> \left(\frac{n}{2}\right)^{n/2} \cdot 1^{n/2} = \left(\frac{n}{2}\right)\ldots$$

$$\Rightarrow n! > \left(\frac{n}{2}\right)^{n/2}$$

$$\overset{*}{\Rightarrow} n \geq \log_2 n! > t\ldots$$

MERGESORT È O…

$(\frac{n}{2}-1) \cdots\cdots 2 \cdot 1$

≥ 1

${}^{n/2}$

$\log_2\left(\frac{n}{2}\right)^{n/2} = \frac{n}{2}\log\frac{n}{2}$

$\in \Omega(n\log n)$

...TIMO!

$L_\pi(n) \in \Omega(\log S($

$S(n)$ # possibil

RICERCA IN ARRAY DI n E

$S(n) = n+1$

$L_\pi(n) \in \Omega(\log(n$

$n))$

' Soluzioni

ECEDENTI

$+1)) = \Omega(\log n)$