

Computation Model

$O(n^2) \rightarrow$ time primitive operations

- word-RAM model

- word (32-bit)
- const time word operations

RAM-random access

- array
- read/write an arbitrary pos in constant time

graph: BFS

n vertices

$\log_2 n$ bits

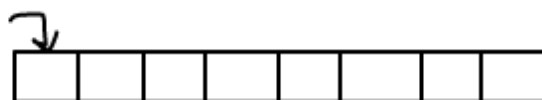
$i < j$

$O(n)$ -time

binary search

sorted array $O(\log n)$ time

Turing machine



numerical problems

$\det \left(\begin{smallmatrix} & \\ f & \end{smallmatrix} \right)$

$\log n$ bits