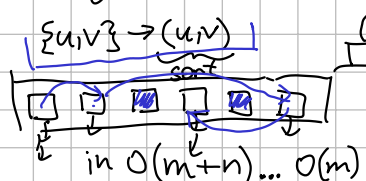


RAM Word-RAM w -bit
 arithm. & indexing
 $W \in \Omega(\log n)$

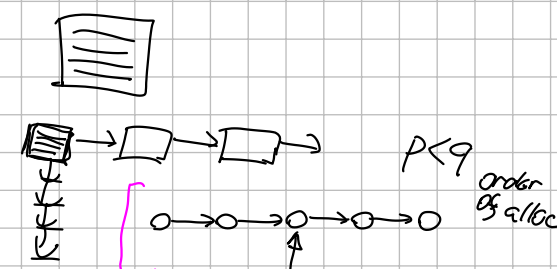
Pointer machines

Bucket Sorting



• arithmetic PM

Σ arith: $O(\#digits)$



Tree Isomorphism

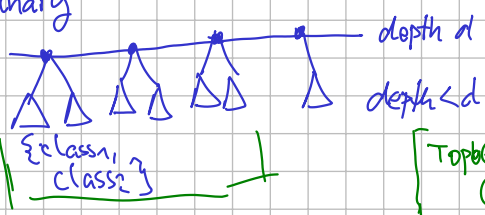
center



- induction on depth
- sort by depth
- binary

depth 0

$O(\#subtrees + \#buckets)$
 unification
 upto n



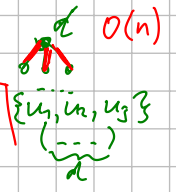
General trees

for each depth: sort by #children

unification on PM Given: $S_1 \dots S_n$
 over alphabet Σ

$O(n + \sum_i |S_i| + |\Sigma|)$
 once

Topolog. Graph Computations



Union-Find

