Munro's offline BST [ESA 2000]

6.897
L9.4
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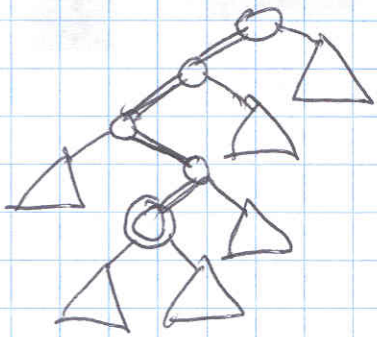
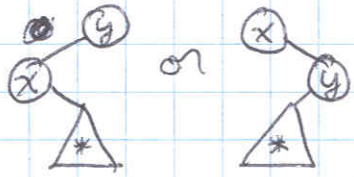
- upon search for an element, look at path to root & subtrees hanging off



- re-arrange this structure as a BST, without entering subtrees, to minimize <u>depth</u> of next-requested node
  - if it's on the path, put it at the root ⇒ depth 1
  - if it's in a subtree, either



⇒ depth 2+

- subject to this constraint, minimize depth of second-next-requested node
  - if it's ≤ x, put x at root
  - if it's ≥ y, put y at root

  (if between x & y, nothing to do)
- third-next-requested node, etc.

<u>Conjecture</u>: Munro's method = O(1) × dynamic OPT

<u>Conjecture</u>: Munro's method ≤ 1 + dynamic OPT !

weaker: m +