Range Counting

Count (or enumerate) objects in a given range (many times)
USE ARRAY: $O(\log n)$ to place $L,R \rightarrow$ to count. (binary search)

$O(k + \log n)$ to enumerate/report.

but this is not dynamic $[\text{insert/delete data: } O(n)]$
Store size of each subtree
$O(\log n)$ nodes visited

- 2 paths root→leaf
- 1 neighbor off path per node

○ : "inside"
× : "outside"
Can we update subtree sizes when inserting/deleting data?

Use a RB tree

when are subtree sizes affected?  Rotations