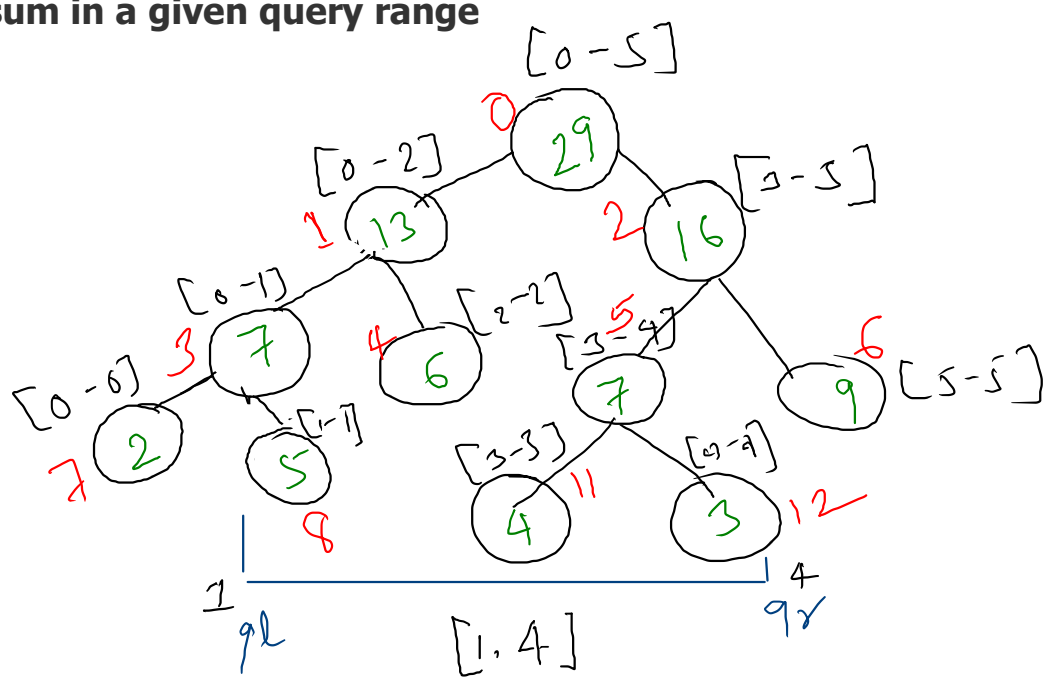
Search the first index where prefix-sum is greater than the given-sum in a given query range



CASE 1: When a tree node lies completely outside the query range. (tr < ql || tl > qr)
retrun INTEGER.MIN;

CASE 2: When a tree node lies completely inside the query range. (ql <= tl && tr <= qr)

CASE 2A: When node-sum is less than the given-sum, then we need to adjust the given-sum and terminate the recursion for this branch.

```
if (tree[bfsIndex] < givenSum[0]) {
        givenSum[0]= givenSum[0] - tree[bfsIndex];
    return -1; // stops the recursion for this branch
 }
```

CASE 2B: When node-sum is greater than the given-sum, we need to branch the recursion and further check for CASE2A and CASE2B until control reaches to leaf node.

CASE 3: When a tree node lies partially inside the query range we need to branch the recursion and further check for CASE1 and CASE2 to terminate the recursion.