

OS-RANK(T, x)

```
1   $r = x.left.size + 1$            // rank of  $x$  within the subtree rooted at  $x$ 
2   $y = x$                          // root of subtree being examined
3  while  $y \neq T.root$ 
4      if  $y == y.p.right$            // if root of a right subtree ...
5           $r = r + y.p.left.size + 1$  // ... add in parent and its left subtree
6           $y = y.p$                  // move  $y$  toward the root
7  return  $r$ 
```