

RANDOMIZED-SELECT(A, p, r, i)

1 **if** $p == r$

2 **return** $A[p]$

3 $q = \text{PARANOID-PARTITION}(A, p, r)$

4 $k = q - p + 1$

5 **if** $i == k$

6 **return** $A[q]$

7 **elseif** $i < k$

8 **return** **RANDOMIZED-SELECT**($A, p, q - 1, i$)

9 **else return** **RANDOMIZED-SELECT**($A, q + 1, r, i - k$)