

RANDOMIZED-SELECT

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

```
1: if  $p == r$  then
2:   return  $A[p]$ 
3:  $q = \text{RANDOMIZED-PARTITION}(A, p, r)$ 
4:  $k = q - p + 1$ 
5: if  $i == k$  then
6:   return  $A[q]$  // the pivot value is the answer
7: if  $i < k$  then
8:   return RANDOMIZED-SELECT( $A, p, q - 1, i$ )
9: else
10:  return RANDOMIZED-SELECT( $A, q + 1, r, i - k$ )
```