

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

if $p == r$

return $A[p]$

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

$k = q - p + 1$

if $i == k$ *// pivot value is the answer*

return $A[q]$

elseif $i < k$

return $\text{RANDOMIZED-SELECT}(A, p, q - 1, i)$

else return $\text{RANDOMIZED-SELECT}(A, q + 1, r, i - k)$