# Quicksort Pseudo-Code

QUICKSORT(A, p, r)  
1 if p < r  
2 q = PARTITION(A, p, r)  
3 QUICKSORT(A, p, q-`1)  
4 QUICKSORT{A, q + 1, r}

**Partitioning the array**

The key to the algorithm is the PARTITION procedure, which rearranges the subarray

A[p..r] in place.

**Partition Pseudo Code**

PARTITION(A, p, r)  
1 x = A[r]  
2 i = p – 1  
3 for j = p to r – 1  
4 if A[j] <= x  
5 I = i + 1  
6 exchange A[i] with A[j]  
7 exchange A[I + 1] with A[r]  
8 return i + 1