```
MERGE-SORT(A, p, r)
1  if p ≥ r                                  // zero or one element?
2      return
3  q = ⌊(p + r)/2⌋                           // midpoint of A[p : r]
4  MERGE-SORT(A, p, q)                       // recursively sort A[p : q]
5  MERGE-SORT(A, q + 1, r)                   // recursively sort A[q + 1 : r]
6  // Merge A[p : q] and A[q + 1 : r] into A[p : r].
7  MERGE(A, p, q, r)
```