

P-MERGE-SORT(A, p, r)

```
1  if  $p \geq r$                                 // zero or one element?
2      return
3   $q = \lfloor (p + r)/2 \rfloor$                     // midpoint of  $A[p : r]$ 
4  // Recursively sort  $A[p : q]$  in parallel.
5  spawn P-MERGE-SORT( $A, p, q$ )
6  // Recursively sort  $A[q + 1 : r]$  in parallel.
7  spawn P-MERGE-SORT( $A, q + 1, r$ )
8  sync                                         // wait for spawns
9  // Merge  $A[p : q]$  and  $A[q + 1 : r]$  into  $A[p : r]$ .
10 P-MERGE( $A, p, q, r$ )
```