

**2)** (5 pts) ALG (Sorting)

(a) (3 pts) Explain why, in the worst case, Quick Sort runs more slowly than Merge Sort.

(b) (2 pts) In practice, Quick Sort runs slightly faster than Merge Sort. This is because the partition function can be run "in place" while the merge function can not. More clearly explain what it means to run the partition function "in place".