

## Worksheet 14: Quick Sort and Merge Sort

The goal of this worksheet is to get some practice at Quick Sort and Merge Sort.

Hand in Q1, Q4 and Q5 (each Question has equal marks).

1. Sort the following list of numbers in ascending order using Merge Sort:

25, 12, 7, 4, 2, 15, 19, 23, 45, 17, 9, 6, 39, 42, 31, 6, 24

2. Sort the following list of numbers in ascending order using Quick Sort:

25, 12, 7, 4, 2, 15, 19, 23, 45, 17, 9, 6, 39, 42, 31, 6, 24

3. Sort the following list of numbers in descending order using Merge Sort:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 2, 4, 8, 10, 14, 14

4. Sort the following list of numbers in descending order using Quick Sort:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 2, 4, 8, 10, 14, 14

5. Sort the following list of strings in increasing lexicographic order (a comes before b, a comes before aa, ...) using Merge Sort:

the cat sat on the mat and was big and white and fat

6. Sort the following list of strings in increasing lexicographic order (a comes before b, a comes before aa, ...) using Quick Sort:

the cat sat on the mat and was big and white and fat