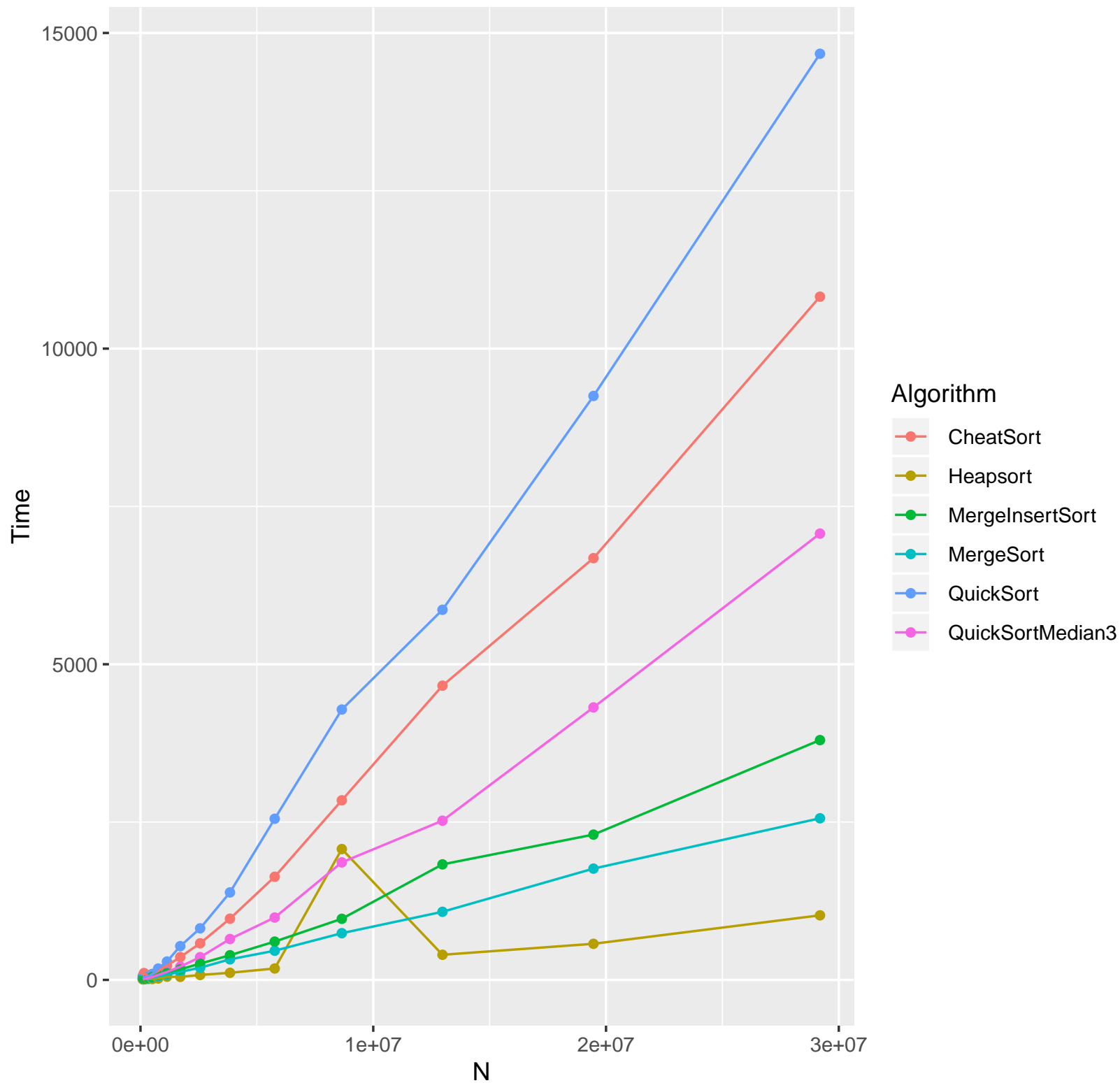


Exercise 1

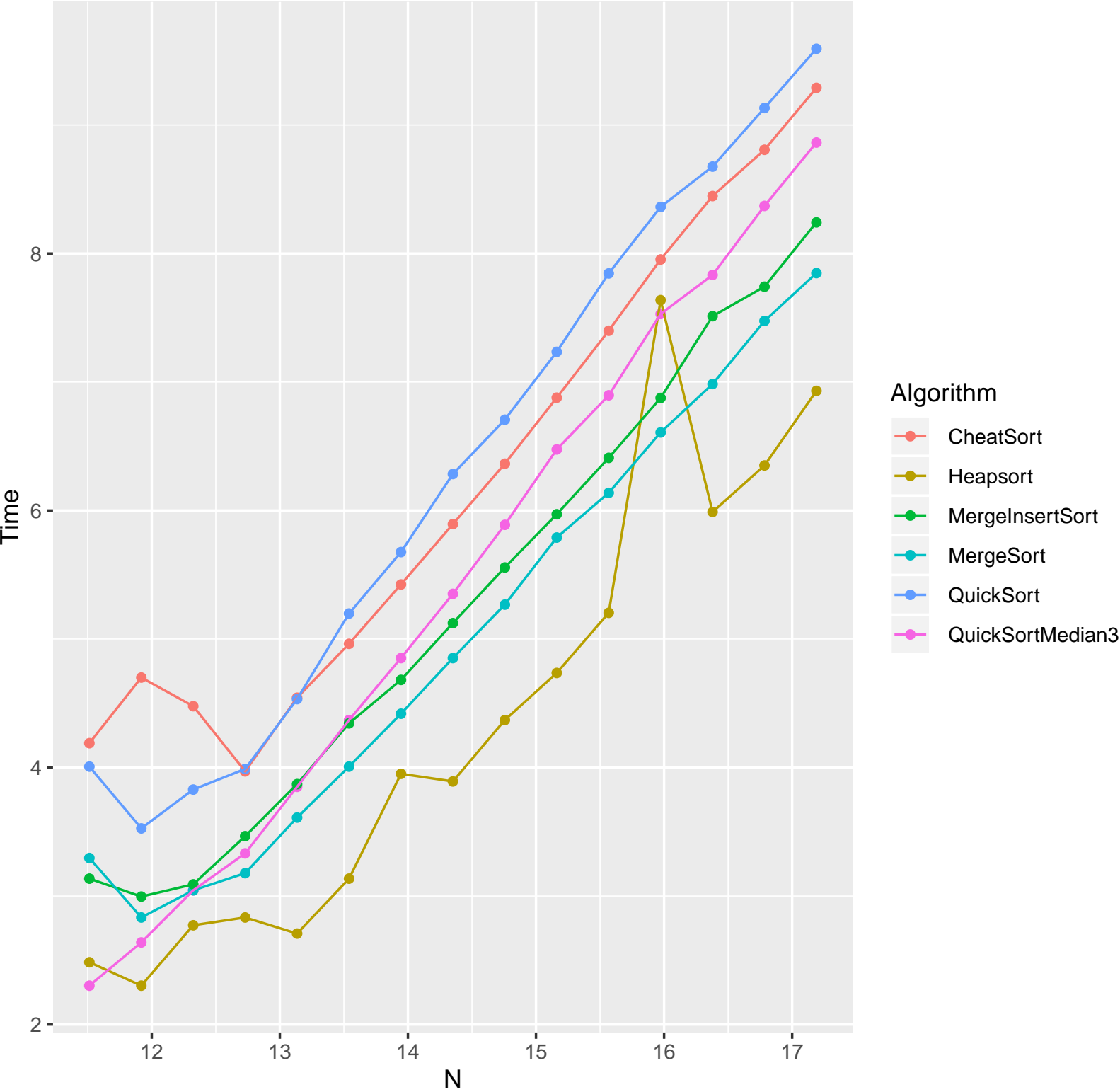
If we stop the scanning when the elements are equal, we stop scanning at every step. This is a worst case scenario and we swap the elements every time we check them until we get to the middle of the array(4th element). So in this case, the partition returned will be 4. If we continue scanning when the elements are equal, we keep scanning for an element higher than the first one and we don't find any until we reach the end of the array. In this case, the partition returned will be 9, the last index.

Exercise 5

Normal Scale



Log-Log Scale



Slopes:

1. CheatSort: 0.9642
2. Heapsort: 0.8969
3. MergeInsertSort: 0.9841
4. MergeSort: 0.926
5. QuickSort: 1.141
6. QuickSortMedian3: 1.193