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M/W CECS 274

CH 14 HW

1.

Linear Search – 45 not found after 9 comparisons, 54 found after 5 comparisons.
Binary Search – 45 not found after 3 comparisons, 54 found after 3 comparisons.

2.

Sort Method	# of comparisons
Selection Sort	$O(n^2)$
Insertion Sort	$O(n)$
Bubble Sort	$O(n)$
Quick Sort	$O(n^2)$
Merge Sort	$O(n * \log n)$

3.

Selection Sort – The number of comparisons stays the same, unsorted vs sorted
Insertion Sort – The number of comparisons is N for sorted, unsorted is $O(n^2)$.
Bubble Sort – The number of comparisons is N for sorted, worst case $O(n^2)$
Quick Sort – Number of comparisons stays the same, unsorted vs sorted
Merge Sort – Number of comparisons stays the same, unsorted vs sorted

4.

Selection Sort – Attached
Insertion Sort –Attached
Bubble Sort – Attached

5.

Attached