

CS 758/858 Homework 3: Heaps
for Thu Sep 10 2026

These are some suggestions to help you prepare for quiz 3.

1. Study merge sort
2. Give the time complexity of each operation when performed on an array and when performed on a singly-linked list:
 - (a) accessing the i th element,
 - (b) inserting an element at the end (assuming the array already has unused space at the end),
 - (c) inserting an element at the beginning (assuming the array already has unused space at the end),
 - (d) constructing a copy with the same elements but in reverse order,
 - (e) constructing a copy with the same elements in the same order but all occurrences of a given element x removed, and
 - (f) modifying the original to remove all occurrences of a given element x .
3. Exercise 2.3–8 from CLRS.
4. (858 only) Exercise 7.2–2 from CLRS.
5. Exercise 6.1–3 from CLRS.
6. Exercise 6.1–4 from CLRS.