Chapter 1 Written

Chapter 1.1

1-real life example of sorting is when you are writing a paper in APA and doing you reference page you have to sort your reference in alphabetical order. Real life example of convex hull is when you have a backyard and items in the backyard and only allowed a certain amount of space you can build a fence that can contain all the stuff and be within the bound.

3-linked list strengths insertion and deletion of nodes are easy compared to arrays, its dynamic so it can grow or shrink in runtime. Weakness traversal of link list specifically reverse traversal, and also more memory than just basic array.

5-right now with covid when someone is in really bad shape, they are put on a ventilator which breaths for the person. So, this needs to be exact you can't just give less air to a person it needs to be right. In example of approximately is making a grocery's list and having a budget you are trying stay within, obviously better to stay within budget but if you can't it's not the worse you still need to buy food.

Chapter 1.2

2-insertion beats merger sort starting at 2 and going up all the way until 43. At n=44 merge sort beats insertion sort

3-the smallest value of n for running time for $100n^2$ is faster than algorithm 2^n at n=15 where first algorithm equals 22500 and the second algorithm equals 32768