Class work: Linear time sorting

8.1-1 What is the smallest possible depth of a leaf in a decision tree for a comparison sort of n elements?

8.2-2 Argue that Counting-sort is stable.

8.2-3 Suppose that we were to rewrite the last for loop in Counting-sort as: for j=1 to A.length (instead of: for j=A.length down to 1). Would the algorithm work (i.e. sort properly)? What would change?

8.3-1 Illustrate the operation of Radix-sort on the following list of English words: COW, DOG, SEA, RUG, ROW, MOB, BOX, TAB, BAR, EAR, TAR, DIG, TEA, NOW, FOX.