Introduction to Algorithms
Practice Quiz (Introduction)
Total Points: 100

1. Write a pseudocode for the following sorting algorithm that sorts n numbers in descending order. Consider that the input numbers are given in the form of an array A. You make multiple passes through the array in the following way. In the first pass you find the largest element in the array and place at position 1. In the second pass, you find the second largest element in the array and place it at position 2. In this way in the i^{th} pass you find the i^{th} largest element in the array and place it at position i. After n passes through the array, it should be sorted. **(25 points)**

2. A and B are two sorted arrays (ascending order) of size n. You are provided another array C of size n. Write the pseudocode for finding the n smallest numbers in A and B and inserting it into a single sorted array C. **(25 points)**

3. Sort the following numbers in ascending order using selection sort 5, 7, 3, 8, 2, 9, 10, 12. **(25 points)**

4. Sort the following numbers in ascending order using bubble sort 5, 7, 3, 8, 2, 9, 10, 12. **(25 points)**