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Homework 5

Q1) In this algorithm i used 1 for loop and i found optimum values for both cities.

Time complexity is $O(n)$.

Q2) In this algorithm i used 1 for loop so the time complexity is $O(n)$. Also if the arrays are not sorted, we can sort them $O(n \log n)$ time.

Q3) First i initialize smallest and largest possible subsets sum for negative integers. Then call the function recursively till to find the target (0).

The time complexity is $2T(n) + O(n) \Rightarrow$ $O(n)$

Q4) I create a matrix which allows to compare the two sequences. The score as determined through use of above calculation is placed in corresponding cell. The time complexity is $O(mn)$

Q5) I used 1 for loop for the calculation. Negative numbers converted to positive. So The time complexity is $O(n)$