

Problem 1:

You are given an array of integer numbers **nums**, where $0 \leq \text{nums}[i] \leq 10^5$. Sort the numbers in ascending order. You can only use arrays, loops and input-output functions. Try not to use nested loops.

Input:

nums = [8, 7, 2, 5, 3, 1, 8, 5]

Output:

nums = [1, 2, 3, 5, 5, 7, 8, 8]

Problem 2:

You are given an array of integer numbers **nums** and an integer number **target**.

Tasks:

1. Find any pair (i, j) such that $\text{nums}[i] + \text{nums}[j] = \text{target}$ and $(i \neq j)$ or say does not exist.
2. Find how many pairs of index (i, j) exist so that $\text{nums}[i] + \text{nums}[j] = \text{target}$ and $(i \neq j)$.
 - ◇ Case 1: $0 \leq \text{nums}[i] \leq 10^5$
 - ◇ Case 2: $-10^5 \leq \text{nums}[i] \leq 10^5$

Note: You can only use arrays, loops and input-output functions. Try not to use nested loops.

Input:

nums = [8, 7, 2, 5, 3, 1]

target = 10

Output:

Task 1: (0,2) or (1, 4) [anyone is okay]

Task 2: 2 pairs.