Online on Array

Section: A1+A2 Time: 60 minutes

Problem 1:

You are given an array height[] of length n, where each element represents the height of a vertical line drawn at position i on the x-axis (from i = 0 to i = n-1). Any two lines can form a container with the x-axis. The goal is to find the two lines that, along with the x-axis, can contain the maximum area of water.

Your task is to **print the maximum area** that can be formed.

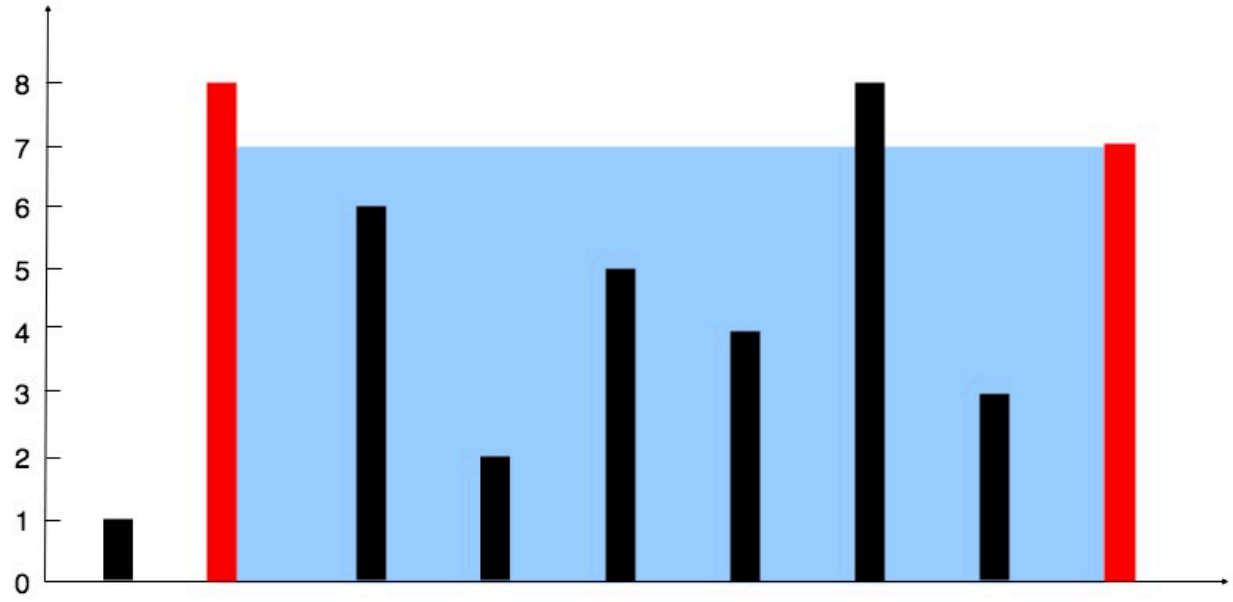
Input:

- First line: A single integer n ($1 \leq n \leq 10^5$) — the number of vertical lines.
- Second line: n space-separated integers `height[0] height[1] ... height[n-1]` ($0 \leq$ height[i] $\leq 10^4$)

Output:

- A single integer — the maximum area of water that can be stored.

Examples:



Input:
9
1 8 6 2 5 4 8 3 7
Output: 49 (See above figure)

Input:
6
1 1 4 3 2 5
Output: 12

Problem 2:

You are given two arrays representing two **non-negative integers**, where each digit is stored in reverse order (i.e., the least significant digit comes first). Your task is to **add the two numbers** and return the result as a **new array**, also in reversed order.

Input:

- First line: An integer n1 ($1 \leq n1 \leq 10^5$) — number of digits in the first number.
- Second line: n1 space-separated integers — the digits of the first number (each between 0 and 9).
- Third line: An integer n2 ($1 \leq n2 \leq 10^5$) — number of digits in the second number.
- Fourth line: n2 space-separated integers — the digits of the second number (each between 0 and 9).

Output:

- A single line of space-separated integers — the digits of the sum (in reversed order).

Examples:

Input:
3
2 4 3
3
5 6 4
Output: 7 0 8
Explanation:
Array `[2,4,3]` represents 342 and `[5,6,4]` represents 465.
342 + 465 = 807
So, output is `[7,0,8]` which represents 807.

Input:
3
3 4 2
5
7 6 5 9 9
Output: 0 1 8 9 9

Input:

1

1

5

9 9 9 9 9

Output: 0 0 0 0 0 1