


Assignment Case	
DS using CH1	
Periode Berlaku Semester Ganjil 2024/2025 Valid on Odd Year 2024/2025	Software Laboratory Center Assistant Recruitment 25-1

## Soal

Case

### Concoctiosnist

Deep in the woods of **Vinte e Três a Um**, lived a legendary alchemist known for creating potions so powerful they could regrow limbs. What few people knew, however, was that his success came from a chaotic yet legendary technique called **“random bull-sh\*t go!”**.

In this process, the alchemist gathers **N** different materials stored in an array, each containing aether amounts **M<sub>1</sub>, M<sub>2</sub>, ..., M<sub>N</sub>**. He then combines **all possible continuous subarrays** of these materials, creating new ones with varying aether values. Once done, he arranges the new materials in non-decreasing order based on their aether. Finally, he selects the materials between indices **L** and **R** to be infused into his latest creation.

**Note. Make sure to print the output with Module  $10^9 + 7$  as the number can get really big**

### Input

- The first line will consist of **N** representing the number of materials on hand.
- The second line will consist of **M<sub>1</sub>, M<sub>2</sub>, ..., M<sub>N</sub>** representing the aether contained on each element.
- The third line will consist of **L** and **R**, representing the starting and ending indices to sum all combinations of subarrays.

## Constraint

$$1 \leq N \leq 200$$

$$1 \leq L \leq R \leq N$$

$$1 \leq M_1, M_2, \dots, M_N \leq 1000$$

## Output

Print the sum of aether obtained from the materials at indices **L** to **R**.

## Example

Input	Output
4  1 2 3 4  0 4	13
3  1 1 1  0 1	2

## Explanation

In the first test case,

Calculating all the possible combinations will result in a new array with size  $(n*(n-1)/2)$  which is [1, 3, 6, 10, 2, 5, 9, 3, 7, 4]. These combinations are from sum of non-empty subarrays which can be obtained from

$$[1] = 1$$

$$[2] = 2$$

$$[3] = 3$$

$$[4] = 4$$

$$[1, 2] = 1 + 2 = 3$$

$$[2, 3] = 2 + 3 = 5$$

$$[3, 4] = 3 + 4 = 7$$

$$[1, 2, 3] = 1 + 2 + 3 = 6$$

$$[2, 3, 4] = 2 + 3 + 4 = 9$$

$$[1, 2, 3, 4] = 1 + 2 + 3 + 4 = 10$$

This array will be re-arranged to be sorted in an increasing order [1, 2, 3, 3, 4, 5, 6, 7, 9, 10]. Lastly, we will sum from index 0 to 4 making  $1 + 2 + 3 + 3 + 4 = 13$

**Note 1:** Use `scanf("%d", &A)` to do the input, and use `printf("%d\n", .....)` to output the answer. Pay attention to the extra newline character at the end (See Note 2)!

**Note 2:** Always print a newline (`\n`) at the end of the answer