

## Problem 2. Pokemon Don't Go

Ely likes to play Pokemon Go a lot. But Pokemon Go bankrupted ... So the developers made Pokemon Don't Go out of depression. And so Ely now plays Pokemon Don't Go. In Pokemon Don't Go, when you walk to a certain pokemon, those closer to you, naturally get further, and those further from you, get closer.

You will receive a **sequence of integers**, separated by **spaces** – the distances to the pokemons.

Then you will begin **receiving integers**, which will **correspond** to **indexes** in **that sequence**.

When you **receive** an **index**, you must **remove** the **element** at **that index** from the **sequence** (as if you've captured the pokemon).

- You must **INCREASE** the **value** of **all elements** in the sequence which are **LESS** or **EQUAL** to the **removed element**, with the **value** of the **removed element**.
- You must **DECREASE** the **value** of **all elements** in the sequence which are **GREATER** than the **removed element**, with the **value** of the **removed element**.

If the **given index** is **LESS** than **0**, **remove** the **first element** of the **sequence**, and **COPY** the **last element** to its place.

If the **given index** is **GREATER** than the **last index** of the **sequence**, **remove** the **last element** from the sequence, and **COPY** the **first element** to its place.

The **increasing** and **decreasing** of elements should be done in these cases, **also**. The **element**, whose value you should use is the **REMOVED** element.

The program **ends** when the **sequence** has **no elements** (there are no pokemons left for Ely to catch).

### Input

- On the **first line** of input you will receive a **sequence of integers**, **separated by spaces**.
- On the **next several** lines you will receive **integers** – the **indexes**.

### Output

- When the program ends, you must print on the console, the **summed up value** of **all REMOVED elements**.

### Constraints

- The input data will consist **ONLY** of **valid integers** in the range **[-2.147.483.648, 2.147.483.647]**.

### Examples

Input	Output	Comments
4 5 3 1 1 0	14	The array is {4, 5, 3}. The index is 1. We remove 5, and we increase all lower than it and decrease all higher than it. In this case there are no higher than 5. The result is {9, 8}. The index is 1. So we remove 8, and decrease all higher than it. The result is {1}. The index is 0. So we remove 1. There are no elements left, so we print the sum of all removed elements. $5 + 8 + 1 = 14$ .

5 10 6 3 5 2 4 1 1 3 0 0	51	<p>Step 1: {11, 4, 9, 11}</p> <p>Step 2: {22, 15, 20, 22}</p> <p>Step 3: {7, 5, 7}</p> <p>Step 4: {2, 2}</p> <p>Step 5: {4, 4}</p> <p>Step 6: {8}</p> <p>Step 7: {} (empty).</p> <p>Result = 6 + 11 + 15 + 5 + 2 + 4 + 8 = 51.</p>
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