Richmond Green P4 - HEIGHT

Time limit: 1.0s **Memory limit:** 32M

Mr.Hsiung dresses fashionably every day. Not surprisingly, he only does this because he is overly conscious about his height. He has a sequence of N integers, each representing his height at a certain time. However, he organized them poorly. Mr.Hsiung doesn't care about having all of the heights, so he will take some of them, while keeping their relative order. Additionally, this new subsequence of numbers he has must be **strictly increasing**, as it wouldn't make sense for him to grow shorter. He also wants the sequence with the sum of its elements being maximal. Help Mr.Hsiung find this sum.

Input Specification

The first line will contain the integer N $(1 \leq N \leq 1000)$, the number of elements in the original sequence. The N lines will contain N elements, a positive integer at most 1000. For 50% of test cases, $1 \leq N \leq 10$.

Output Specification

Output the maximum sum of Mr.Hsiung's new sequence.

Sample Input 1

```
5
4
1
2
5
6
```

Sample Output 1

```
15
```

Explanation 1

In this case, the subsequence $4, 5, 6$ is optimal.

Sample Input 2

```
5
10
9
8
7
6
```

Sample Output 2

```
10
```

Explanation 2

In this case, no subsequence containing more than 1 element is increasing. Thus, choosing 10 is optimal.