Contest Duration: 2025-05-24(Sat) 08:00 (http://www.timeanddate.com/worldclock/fixedtime.html? iso=20250524T2100&p1=248) - 2025-05-24(Sat) 09:40 (http://www.timeanddate.com/worldclock/fixedtime.html? iso=20250524T2240&p1=248) (local time) (100 minutes) Back to Home (/home)

↑ Top (/contests/abc407)

■ Tasks (/contests/abc407/tasks)

- **?** Clarifications (/contests/abc407/clarifications)
- ✓ Submit (/contests/abc407/submit?taskScreenName=abc407_f) Results ▼
- **↓** Standings (/contests/abc407/standings)
- ↓ Virtual Standings (/contests/abc407/standings/virtual)
- Custom Test (/contests/abc407/custom_test)
 Editorial (/contests/abc407/editorial)
- Discuss (https://codeforces.com/blog/entry/143155)

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F - Sums of Sliding Window Maximum

Editorial (/contests/abc407/tasks/abc407_f/editorial)



Time Limit: 2 sec / Memory Limit: 1024 MB

 ${\it Score}: 550 \ {\it points}$

Problem Statement

You are given a sequence of non-negative integers $A=(A_1,\ldots,A_N)$ of length N.

For each $k=1,\dots,N$, solve the following problem:

• A has N-k+1 (contiguous) subarrays of length k. Take the maximum of each of them, and output the sum of these maxima.

Constraints

- $1 \le N \le 2 \times 10^5$
- $0 \le A_i \le 10^7 \, (1 \le i \le N)$
- All input values are integers.

Input

The input is given from Standard Input in the following format:

2025-05-24 (Sat) 23:47:20 -04:00 A_1 A_2 ... A_N

Output

Output N lines. The i-th line ($1 \leq i \leq N$) should contain the answer for k=i.

Sample Input 1 Copy



Copy 5 3 4 2

Sample Output 1

```
Copy
14
13
9
5
```

For k=1, there are four subarrays of length k=1:

- (5), whose maximum is 5;
- (3), whose maximum is 3;
- (4), whose maximum is 4;
- (2), whose maximum is 2.

The sum is 5 + 3 + 4 + 2 = 14.

For k=2, there are three subarrays of length k=2:

- (5,3), whose maximum is 5;
- (3,4), whose maximum is 4;
- (4,2), whose maximum is 4.

The sum is 5 + 4 + 4 = 13.

For k=3, there are two subarrays of length k=3:

- (5,3,4), whose maximum is 5;
- (3,4,2), whose maximum is 4.

The sum is 5+4=9.

For k=4, there is one subarray of length k=4:

• (5,3,4,2), whose maximum is 5.

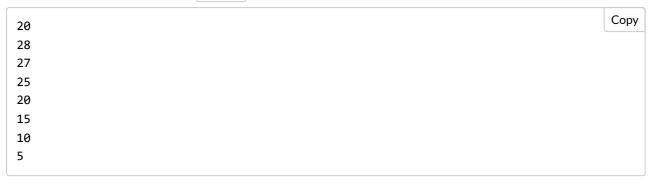
2025-05-24 (Sat) 23:47:20 -04:00

The sum is 5.

Sample Input 2 Copy

8 2 0 2 5 0 5 2 4

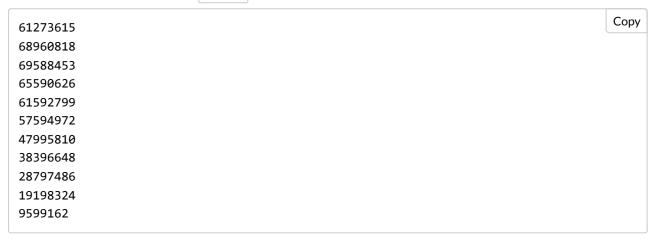
Sample Output 2 Copy



Sample Input 3 Copy

11
9203973 9141294 9444773 9292472 5507634 9599162 497764 430010 4152216 3574307 430010

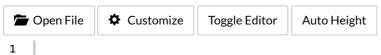
Sample Output 3 Copy



Language

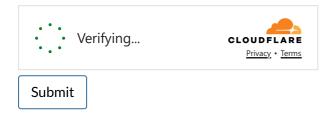
Python (CPython 3.11.4)

Source Code



2025-05-24 (Sat) 23:47:20 -04:00

- * at most 512 KiB
- * Your source code will be saved as Main. extension.



/#telegram)

Rule (/contests/abc407/rules) Glossary (/contests/abc407/glossary)

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2025-05-24 (Sat) 23:47:20 -04:00