

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

A. SuperMemo

time limit per test: 1 second
memory limit per test: 256 megabytes

Your friend, Jackson is invited to a TV show called SuperMemo in which the participant is told to play a memorizing game. At first, the host tells the participant a sequence of numbers, $\{A_1, A_2, \dots A_n\}$. Then the host performs a series of operations and queries on the sequence which consists:

- ADD* $x\ y\ D$: Add D to each number in sub-sequence $\{A_x \dots A_y\}$. For example, performing "*ADD* 2 4 1" on $\{1, 2, 3, 4, 5\}$ results in $\{1, 3, 4, 5, 5\}$
- REVERSE* $x\ y$: reverse the sub-sequence $A_x \dots A_y$. For example, performing "*REVERSE* 2 4" on $\{1, 2, 3, 4, 5\}$ results in $\{1, 4, 3, 2, 5\}$
- REVOLVE* $x\ y\ T$: rotate sub-sequence $A_x \dots A_y$ T times. For example, performing "*REVOLVE* 2 4 2" on $\{1, 2, 3, 4, 5\}$ results in $\{1, 3, 4, 2, 5\}$
- INSERT* $x\ P$: insert P after A_x . For example, performing "*INSERT* 2 4" on $\{1, 2, 3, 4, 5\}$ results in $\{1, 2, 4, 3, 4, 5\}$
- DELETE* x : delete A_x . For example, performing "*DELETE* 2" on $\{1, 2, 3, 4, 5\}$ results in $\{1, 3, 4, 5\}$
- MIN* $x\ y$: query the participant what is the minimum number in sub-sequence $\{A_x \dots A_y\}$. For example, the correct answer to "*MIN* 2 4" on $\{1, 2, 3, 4, 5\}$ is 2

To make the show more interesting, the participant is granted a chance to turn to someone else that means when Jackson feels difficult in answering a query he may call you for help. You task is to watch the TV show and write a program giving the correct answer to each query in order to assist Jackson whenever he calls.

Input

The first line contains n ($n \leq 100000$).

The following n lines describe the sequence.

Then follows M ($M \leq 100000$), the numbers of operations and queries.

The following M lines describe the operations and queries.

Output

For each "*MIN*" query, output the correct answer.

Examples

input	Copy
5 1 2 3 4 5 2 ADD 2 4 1 MIN 4 5	
output	Copy
5	

input	Copy
10 1 2 3 4 5 6 7 8 9 10 15 ADD 4 8 3 MIN 5 7 MIN 7 10 REVERSE 2 5 MIN 2 6 MIN 2 3 INSERT 3 4 MIN 3 4 MIN 5 10 DELETE 6 MIN 3 5 MIN 4 4 REVOLVE 3 6 7 MIN 5 8 MIN 7 10	
output	Copy
8 9 2 7 4 2 3 4 7 9	

Note

All input fits in 32-bit integers. Every number in the sequence after every operation fits in a 32-bit integer.

Splay Training
Finished
Practice
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→ About Contest
A test problem for Splay.

→ Virtual participation	▼
Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.	
Start virtual contest	

→ Clone Contest to Mashup	▼
You can clone this contest to a mashup.	
Clone Contest	

→ Submit?	
Language:	GNU G++20 13.2 (64 bit, win ▼)
Choose file:	Choose File No file chosen
Submit	

→ Last submissions		
Submission	Time	Verdict
304289452	Feb/03/2025 19:49	Accepted
304238183	Feb/03/2025 14:17	Accepted
303574182	Jan/29/2025 23:10	Accepted
303573568	Jan/29/2025 23:03	Wrong answer on test 2
303414726	Jan/28/2025 20:49	Accepted
303414495	Jan/28/2025 20:47	Wrong answer on test 2
303414156	Jan/28/2025 20:46	Wrong answer on test 2
303413914	Jan/28/2025 20:44	Wrong answer on test 2
303372732	Jan/28/2025 16:47	Accepted
303221133	Jan/27/2025 15:08	Accepted