

HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP RAYAN 🛣

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

E. DZY Loves Colors

time limit per test: 2 seconds memory limit per test: 256 megabytes

DZY loves colors, and he enjoys painting.

On a colorful day, DZY gets a colorful ribbon, which consists of n units (they are numbered from 1 to n from left to right). The color of the i-th unit of the ribbon is i at first. It is colorful enough, but we still consider that the colorfulness of each unit is 0 at first.

DZY loves painting, we know. He takes up a paintbrush with color x and uses it to draw a line on the ribbon. In such a case some contiguous units are painted. Imagine that the color of unit i currently is y. When it is painted by this paintbrush, the color of the unit becomes x, and the colorfulness of the unit increases by |x - y|.

DZY wants to perform m operations, each operation can be one of the following:

- 1. Paint all the units with numbers between l and r (both inclusive) with color x.
- 2. Ask the sum of colorfulness of the units between l and r (both inclusive).

Can you help DZY?

Input

The first line contains two space-separated integers $n, m \ (1 \le n, m \le 10^5)$.

Each of the next m lines begins with a integer type $(1 \le type \le 2)$, which represents the type of this operation.

If type = 1, there will be 3 more integers l, r, x $(1 \le l \le r \le n; 1 \le x \le 10^8)$ in this line, describing an operation 1.

If type = 2, there will be 2 more integers $l, r (1 \le l \le r \le n)$ in this line, describing an operation 2.

Output

For each operation 2, print a line containing the answer — sum of colorfulness.

Examples

input	Сору
3 3	
1 1 2 4	
1 1 2 4 1 2 3 5	
2 1 3	
output	Сору
8	

input	Сору
3 4	
1 1 3 4	
2 1 1	
2 2 2	
2 3 3	
output	Сору
3	
2	
1	

input	Сору
10 6	
1 1 5 3	
1 2 7 9	
1 10 10 11	
1 3 8 12	
1 1 10 3	
2 1 10	
output	Сору
129	

Note

In the first sample, the color of each unit is initially [1, 2, 3], and the colorfulness is [0, 0, 0].

After the first operation, colors become [4, 4, 3], colorfulness become [3, 2, 0].

After the second operation, colors become [4, 5, 5], colorfulness become [3, 3, 2].

So the answer to the only operation of type 2 is 8.

Codeforces Round 254 (Div. 2)

Finished

Practice



→ Virtual participation

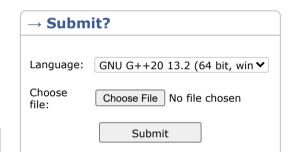
Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you -solve these problems in the archive. If you just want to solve some problem from 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



→ Last submissions		
Submission	Time	Verdict
309272255	Mar/07/2025 00:12	Accepted
309211977	Mar/06/2025 16:15	Accepted
309188865	Mar/06/2025 13:24	Time limit exceeded on test 14
309186228	Mar/06/2025 12:59	Wrong answer on test 6
309185905	Mar/06/2025 12:56	Time limit exceeded on test 14
309185185	Mar/06/2025 12:49	Time limit exceeded on test 14
309184525	Mar/06/2025 12:43	Time limit exceeded on test 14
309172884	Mar/06/2025 11:01	Wrong answer on test 6



→ Contest materials

• Codeforces Round #254 (en)

X

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- Codeforces Round #254 (ru)
- Tutorial (en)