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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

M. Batates and GCD

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

Given an array of n integers and q queries, there are three types of queries:

- 1 l r: Let g be the GCD of the subarray from index l to r. Divide each element in the subarray by g.
- 2 l r: Output the sum of the subarray from index l to r.
- 3: Undo the last applied query of the first type.

Each type 3 query undoes the most recently applied type 1 query that has not been previously canceled.

For each query of type 3, it is guaranteed that there is a query of type 1 that has not been canceled.

Input

The first line contains a single integer t ($1 \le t \le 10^5$) — the number of test cases.

The first line of each test case contains two integers $n, q \ (1 \le n, q \le 10^5)$ — the length of the array a, the number of queries.

The next line contains n integers a_1, a_2, \ldots, a_n $(1 \le a_i \le 10^9)$ — the array a.

The next q lines contain the queries as described above.

It is guaranteed that in the queries of the first and second type $(1 \le l \le r \le n)$.

It is guaranteed that the sum of n and q over all test cases does not exceed 10^5 .

Output

For each query of the second type, output the sum of the subarray from index l to r.

Example

```
input

Copy

1
6 6
2 6 10 5 5 15
1 3 6
2 4 6
1 1 3
2 1 6
3
2 1 6

output

Copy

5
10
15
```

ACPC Scientific Committee Archive

Private

Participant



→ About Group

https://www.youtube.com/@MoamenAhmed98/play

Group website

→ Group Contests



- LCPC 2024 (Mirror)
- JCPC 2024 (Mirror)
- EthCPC (Mirror)
- PCPC 2024
- LyCPC 2024AOCPC 2024
- AOCPC 2023
- QCPC 2024 (Mirror)
- TCPC 2024 (Mirror)
- AICPC 2023
- SCPC 2024 (Mirror)
- SCPC 2024 For Teens (Mirror)
- ECPC 2024 (Mirror)
- ECPC Qualifications 2024 Day 6 (Mirror)
- ECPC Qualifications 2024 Day 5 (Mirror)
- ECPC Qualifications 2024 Day 4 (Mirror)
- ECPC Qualifications 2024 Day 3 (Mirror)
- ECPC Qualifications 2024 Day 2 (Mirror)
- ECPC Qualifications 2024 Day 1 (Mirror)
- International Collegiate Programming Contest, Damascus University Collegiate Programming Contest(2018)
- International Collegiate Programming Contest, Al-Baath, Tishreen, Aleppo and Damascus Collegiate Programming Contest (2021)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 2)
- ACPC Girls 2024
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 6)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 1)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 3)
- ACPC KickOff 2024



- SCPC 2023
- SCPC 2022
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 9)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 8)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 7)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 5)
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications Day 4)
- ACPC KickOff 2022
- ACPC KickOff 2023
- SCPC 2021
- SCPC 2020
- SCPC 2017
- SCPC 2019
- ECPC Teens 2024 (online qualification)
- Kickoff 2021
- ECPC 2021
- ACPC 2023
- Sa3edyCPC 2019
- The 2023 ICPC Egyptian Collegiate Programming Contest (Qualifications -Day 10)
- JCPC 2023
- ECPC Qualifications 20-08-2022
- KCPC 2023
- ACPC Girls 2023
- SCPC Teens 2023
- ACPC 2022
- ACPC 2021
- ACPC 2020
- ACPC 2019
- ACPC 2018
- ECPC 2023ECPC 2022
- ECPC 2020
- ECPC 2019
- ECPC 2018

ECPC Teens 2024 (online qualification)

Finished

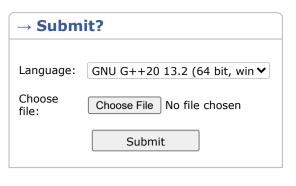
Practice



\rightarrow 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



→ Last submissions		
Submission	Time	Verdict
291102494	Nov/11/2024 21:12	Accepted
274093455	Aug/03/2024 04:17	Accepted
274093338	Aug/03/2024 04:15	Runtime error on test 4
274093233	Aug/03/2024 04:13	Compilation error
274093041	Aug/03/2024 04:10	Runtime error on test 4
274090972	Aug/03/2024 03:18	Runtime error on test 4

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Desktop version, switch to mobile version.

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