

H. La Vaca Saturno Saturnita

time limit per test: 4 seconds
memory limit per test: 256 megabytes

Saturnita's mood depends on an array a of length n , which only he knows the meaning of, and a function $f(k, a, l, r)$, which only he knows how to compute. Shown below is the pseudocode for his function $f(k, a, l, r)$.

```
function f(k, a, l, r):  
    ans := 0  
    for i from l to r (inclusive):  
        while k is divisible by a[i]:  
            k := k/a[i]  
        ans := ans + k  
    return ans
```

You are given q queries, each containing integers k , l , and r . For each query, please output $f(k, a, l, r)$.

Input

The first line contains an integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The first line of each test case contains two integers n and q ($1 \leq n \leq 10^5, 1 \leq q \leq 5 \cdot 10^4$).

The following line contains n integers a_1, a_2, \dots, a_n ($2 \leq a_i \leq 10^5$).

The following q lines each contain three integers k , l , and r ($1 \leq k \leq 10^5, 1 \leq l \leq r \leq n$).

It is guaranteed that the sum of n does not exceed 10^5 over all test cases, and the sum of q does not exceed $5 \cdot 10^4$ over all test cases.

Output

For each query, output the answer on a new line.

Example

input	Copy
2 5 3 2 3 5 7 11 2 1 5 2 2 4 2310 1 5 4 3 18 12 8 9 216 1 2 48 2 4 82944 1 4	
output	Copy
5 6 1629 13 12 520	

Codeforces Round 1017 (Div. 4)

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

Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

Last submissions

Submission	Time	Verdict
315675597	Apr/15/2025 11:15	Accepted
315656462	Apr/15/2025 07:46	Accepted
315656255	Apr/15/2025 07:43	Accepted
315511138	Apr/14/2025 01:06	Accepted
315511028	Apr/14/2025 01:04	Time limit exceeded on test 13

Problem tags

binary searchbrute forcemathnumber theory*1900

No tag edit access

Contest materials

Announcement (en)

Tutorial #1 (en)

Video Tutorial (en)