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D. CGCDSSQ

time limit per test: 2 seconds
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output

Given a sequence of integers a_1, \dots, a_n and q queries x_1, \dots, x_q on it. For each query x_i you have to count the number of pairs (l, r) such that $1 \leq l \leq r \leq n$ and $\gcd(a_l, a_{l+1}, \dots, a_r) = x_i$.

$\gcd(v_1, v_2, \dots, v_n)$ is a greatest common divisor of v_1, v_2, \dots, v_n , that is equal to a largest positive integer that divides all v_i .

Input

The first line of the input contains integer n , ($1 \leq n \leq 10^5$), denoting the length of the sequence. The next line contains n space separated integers a_1, \dots, a_n , ($1 \leq a_i \leq 10^9$).

The third line of the input contains integer q , ($1 \leq q \leq 3 \times 10^5$), denoting the number of queries. Then follows q lines, each contain an integer x_i , ($1 \leq x_i \leq 10^9$).

Output

For each query print the result in a separate line.

Examples

input	Copy
<pre>3 2 6 3 5 1 2 3 4 6</pre>	
output	Copy
<pre>1 2 2 0 1</pre>	

input	Copy
<pre>7 10 20 3 15 1000 60 16 10 1 2 3 4 5 6 10 20 60 1000</pre>	
output	Copy
<pre>14 0 2 2 2 0 2 2 1 1</pre>	

Bayan 2015 Contest Warm Up

[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](#)

→ Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

→ Clone Contest to Mashup

You can clone this contest to a mashup.

[Clone Contest](#)

→ Submit?

Language: GNU G++14 6.4.0

Choose file: [Choose File](#) No file chosen

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

[Submit](#)

→ Last submissions



Submission	Time	Verdict
77070332	Apr/17/2020 15:00	Accepted
77070217	Apr/17/2020 14:59	Wrong answer on test 9
77041195	Apr/17/2020 09:27	Wrong answer on test 7
77041106	Apr/17/2020 09:26	Wrong answer on test 7

→ Problem tags

[brute force](#)[data structures](#)[math](#)[*2000](#)

No tag edit access

[→ Contest materials](#)

- [Announcement \(en\)](#) 
- [Tutorial](#) 

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Server time: Apr/17/2020 18:16:41^{UTC+5.5} (f3).
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