

[All Contests](#) > [e1csd](#) > [SS-Array-T51-M](#)

# SS-Array-T51-M

Problem

Submissions

Leaderboard

Alice has learnt factorization recently. Bob doesn't think she has learnt it properly and hence he has decided to quiz her. Bob gives Alice a very large number and asks her to find out the number of factors of that number. To make it a little easier for her, he represents the number as a product of  $N$  numbers. Alice is frightened of big numbers and hence is asking you for help. Your task is simple. Given  $N$  numbers, you need to tell the number of distinct factors of the product of these  $N$  numbers.

## Input Format

First line of input contains a single integer  $T$ , the number of test cases.

Each test starts with a line containing a single integer  $N$ . The next line consists of  $N$  space separated integers ( $A_i$ ).

## Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 10$
- $2 \leq A_i \leq 1000000$

## Output Format

For each test case, print the total number of factors of the product of given numbers.

## Sample Input 0

```
3
3
3 5 7
3
2 4 6
2
5 5
```

## Sample Output 0

```
8
10
3
```

## Explanation 0

In last test case,  $5*5 = 25$ . Total factors of 25 are 1, 5 & 25. So, the answer is 3.





Contest ends in 37 minutes

Submissions: [2](#)

Max Score: 20

Rate This Challenge:



[More](#)Current Buffer (saved locally, editable)  C++ 

```
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     int t;
11     cin>>t;
12     while(t-->0)
13     {
14         int n;
15         cin>>n;
16         long long int p=1,a,c=0;
17         while(n-->0)
18         {
19             cin>>a;
20             p*=a;
21         }
22         for(int i=1;i<=p;i++)
23         {
24             if(p%i==0)
25                 c++;
26         }
27         cout<<c<<"\n";
28     }
29     return 0;
30 }
```

31

Line: 27 Col: 23

[Upload Code as File](#)

Test against custom input

Run Code

Submit Code

Testcase 0

### Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

**Input (stdin)**

```
3
3
3 5 7
3
2 4 6
2
5 5
```

**Your Output (stdout)**

```
8
10
3
```

**Expected Output**

```
8
10
3
```

---

[Contest Calendar](#) | [Interview Prep](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)