7557 Magical matrix

Chota Pendrive, *Farzi Coder*, *Programmer Bhai* and *Chota Vakil* (oh boy! These deadly coder mafias together, must be looking for something deadly.) are on a hunt, hunt for a treasure. They finally reached their destination. Their destination is a cave which is secured with a gate. When they reached the gate to open it, a magical matrix of size $N \times M$ appeared on the gate. And a task appears in front of them.

Along with the matrix a number K also appeared. As everything is magical here, there are some specific properties for the gate which are the following:

1. K is square free i.e. it is not divisible by any square number greater than 1. e.g. 7, 14, 15 are square free numbers while 12, 9, 50 are not.

2. Every number inside the matrix is either 1 or a prime factor of K

The task here is to calculate the number of sub-matrices whose product of elements is equal to K.

Input

The input file contains several test cases, each of them as described below.

First line contains N, M, K i.e. Number of rows in matrix, number of columns in matrix and magical number. Next N lines contains M integers each.

Output

For each test case, print one line containing total number of submatrices whose product of all elements is equal to K.

Constraints:

- $1 \leq N, M \leq 1000$

- $1 \leq K \leq 10000$

- K is square-free.

- **All elements of matrix are either 1 or one of the prime factors of K.**

Sample Input

```
2 2 2
1 2
2 1
3 3 6
1 2 3
3 1 2
2 2 3
```

Sample Output

```
6
9
```