CodeVita
The TCS Global Coding Contest

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05 Hr 54 Min 38 Sec

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Coding Area

A B C D E F

ONLINE EDITOR (F)

Array Product

Problem Description

You are given a list of N integers and another positive integer K. Write a program to compute the number of ways in which the product P of the given N integers can be expressed as a product of K positive integers (not necessarily distinct). The order of the factors in the expression is not important. For example, 1 x 2 x 3 and 2 x 3 x 1 are not counted as different ways of expressing 6 as a product of three integers.

Constraints

The product of the N integers <= 10^9

Each of the N integers <=5000

Input Format

First line contains two space separated integers, N and K

The next line contains N space separated integers

Output

One line containing the number of ways in which the product of the N integers can be expressed as a product of K positive integers

Explanation

Example 1

Input

2 4

2 3

Output

2

Explanation

The product of the given integers is 6. This can be expressed as a product of 4 integers in 2 ways: 1x1x1x6, 1x1x2x3

Example 2

Input

2 3

4 16

Output

7

Explanation

The product is 64. This can be expressed as a product of three integers in the following ways:

1 x 1 x 64

1 x 2 x 32

1 x 4 x 16

1 x 8 x 8

2 x 2 x 16

2 x 4 x 8

4 x 4 x 4

Upload Solution [Question : F]

☐ I, **VIPUL KUMAR** confirm that the answer submitted is my own.

☐ Took help from online sources (attributions)

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