



STUDENT REPORT

DETAILS

Name

Y MAMATHA

Roll Number

3BR23AI187

EXPERIMENT

Title

NUMBER OF COMBINATIONS LEADING TO A PRODUCT

Description

Problem Statement:

You are given an array `arr` and a product `m`. Your task is to find the number of possible unique triplets whose product of elements is `m`.

Input Format:

- The first line contains the integer, `n`
- The second line contains space separated integers of the array, `arr`
- The third line contains the product `m`.

The input will be read from the STDIN by the candidate

Output Format:

The output consists of a single integer, i.e. the count of unique triplets having product `m`.

The output will be matched to the candidate's output printed on the STDOUT

Example:

Input:

7
5 3 20 10 1 4 2
60

Output:

3

Explanation:

Product `m`:60

Possible triplets for product `m`: (5,4,3),(20,3,1), (10,3,2)

The count of unique triplets is 3.

Source Code:

```
def count_triplets_with_product(arr, n, m):
    count = 0

    for i in range(n):
        for j in range(i + 1, n):
            for k in range(j + 1, n):

                if arr[i] * arr[j] * arr[k] == m:
                    count += 1

    return count

n = int(input())
arr = list(map(int, input().split()))
m = int(input())

print(count_triplets_with_product(arr, n, m))
```

RESULT

6 / 6 Test Cases Passed | 100 %