



Count Triplets ☆

Problem

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You are given an array and you need to find number of tripets of indices (i, j, k) such that the elements at those indices are in [geometric progression](#) for a given common ratio r and $i < j < k$.

For example, $arr = [1, 4, 16, 64]$. If $r = 4$, we have $[1, 4, 16]$ and $[4, 16, 64]$ at indices $(0, 1, 2)$ and $(1, 2, 3)$.

Function Description

Complete the countTriplets function in the editor below. It should return the number of triplets forming a geometric progression for a given r as an integer.

countTriplets has the following parameter(s):

- arr : an array of integers
- r : an integer, the common ratio

Input Format

The first line contains two space-separated integers n and r , the size of arr and the common ratio.

The next line contains n space-separated integers $arr[i]$.

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq r \leq 10^9$
- $1 \leq arr[i] \leq 10^9$

Output Format

Return the count of triplets that form a geometric progression.

Sample Input 0

```
4 2
1 2 2 4
```

Sample Output 0

```
2
```

Explanation 0

There are 2 triplets in satisfying our criteria, whose indices are $(0, 1, 3)$ and $(0, 2, 3)$



Sample Input 1

```
6 3
1 3 9 9 27 81
```

Sample Output 1

6

Explanation 1

The triplets satisfying are index (0, 1, 2), (0, 1, 3), (1, 2, 4), (1, 3, 4), (2, 4, 5) and (3, 4, 5).

Sample Input 2

```
5 5
1 5 5 25 125
```

Sample Output 2

4

Explanation 2

The triplets satisfying are index (0, 1, 3), (0, 2, 3), (1, 3, 4), (2, 3, 4).

Java 7



```
1 import java.io.BufferedReader;
2 import java.io.IOException;
3 import java.io.InputStreamReader;
4 import java.util.HashMap;
5 import java.util.Map;
6 import java.util.StringTokenizer;
7
8 public class Solution {
9
10     public static void main(String[] args) throws
        IOException {
```

Line: 1 Col: 1

Upload Code as File ☐ Test against custom input

Run Code**Submit C**