

1. Nearly Similar Rectangles

Recently, while researching about similar rectangles, you found the term "Nearly Similar Rectangle." Two rectangles with sides (a, b) and (c, d) are nearly similar only if $a/c = b/d$. The order of sides matter in this definition, so rectangles $[4, 2]$ and $[6, 3]$ are nearly similar, but rectangles $[2, 4]$ and $[6, 3]$ are not. Given an array of rectangles with the lengths of their sides, calculate the number of pairs of nearly similar rectangles in the array.

For example, let's say there are $n = 4$ rectangles, and $sides = [[5, 10], [10, 10], [3, 6], [9, 9]]$. In this case, the first and third rectangles, with sides $[5, 10]$ and $[3, 6]$, are nearly similar because $5/3 = 10/6$. Also, the second and fourth rectangles, with sides $[10, 10]$ and $[9, 9]$, are nearly similar because $10/9 = 10/9$. This means there are 2 pairs of nearly similar rectangles in the array. Therefore, the answer is 2.

Function Description

Complete the function `nearlySimilarRectangles` in the editor below.

`nearlySimilarRectangles` has the following parameter:

int `sides[n][2]`: a 2-dimensional integer array where the i^{th} row denotes the sides of the i^{th} rectangle

Returns:

int: the number of nearly similar rectangles in the array

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq sides[i][0], sides[i][1] \leq 10^{15}$

▼ Input Format For Custom Testing

The first line contains an integer, n , denoting the number of rows in `sides`.

The next line contains an integer, 2, denoting the number of columns in `sides`.

Each line i of the n subsequent lines (where $0 \leq i < n$) contains 2 space-separated integers, `sides[i][0]` and `sides[i][1]`, denoting the lengths of the i^{th} rectangle's sides

▼ Sample Case 0

Sample Input For Custom Testing

```
3
2
4 8
15 30
25 50
```

Sample Output

```
3
```

Explanation

In this example, $n = 3$ and `sides = [[4, 8], [15, 30], [25, 50]]`.

- The first and second rectangles, with sides $[4, 8]$ and $[15, 30]$, are nearly similar because $4/15 = 8/30$.
- The first and third rectangles, with sides $[4, 8]$ and $[25, 50]$, are nearly similar because $4/25 = 8/50$.
- The second and third rectangles, with sides $[15, 30]$ and $[25, 50]$ are nearly similar because $15/25 = 30/50$.

This means there are 3 pairs of nearly similar rectangles in this array. Therefore, the answer is 3.

▼ Sample Case 1

Sample Input For Custom Testing

```
5
2|
2 1
10 7
9 6
6 9
7 3
```

Sample Output

```
0
```

Explanation

In this example, $n = 5$ and $sides = [[2, 1], [10, 7], [9, 5], [6, 9], [7, 3]]$. There are no pairs of nearly similar rectangles in this array. Therefore, the answer is 0.