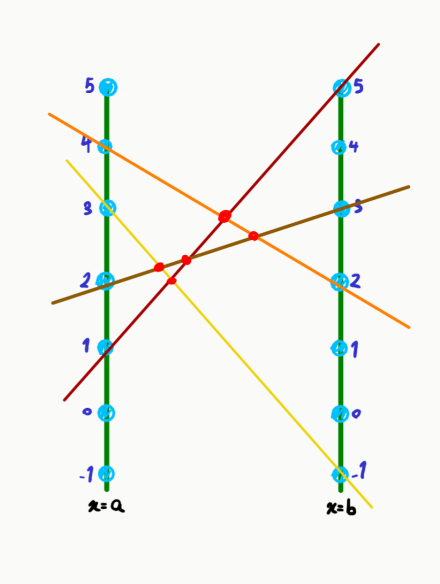
Problem D. Dumb Giants

Once upon a time, some brainless giants lived in a peaceful area near the Bararati river. Sometimes when they got bored, they used to carry long and huge tree trunks and put them over the river randomly.



Now, one of the tribes has decided to make a bridge over the Bararati. They see that some of the trunks are placed on the water by the ancient giants; So as they are pretty lazy, they decide to connect the already existing trunks so they can use them as their bridge. To achive this goal for every two trunks that intersect over the river they should glue these intersections. For each intersection we need tube of glue. Given the tree trunks, how many glue tubes we need?

Input

The first line of input contains an integer n, the count of the tree trunks.

$$1 \leq n \leq 300000$$

In the next n lines, in each line, there are two numbers a_i and b_i, which are the y coordinates of the intersection point of the i-th tree trunk with the two sides of the river $x = a$ and $x = b$ $-10^9 \leq a_i, b_i \leq 10^9$

It is guaranteed that $a_i \neq a_j$ and $b_i \neq b_j$ for $\forall_{i,\ j} i \neq j$.

Output

Print the number of the required glue tubes.

Example

test	answer
4 1 5 3 -1 4 2 2 3	5

Notes

In the first example we need 5 tubes of glue as shown in the figure.