C. History

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Polycarpus likes studying at school a lot and he is always diligent about his homework. Polycarpus has never had any problems with natural sciences as his great-great-grandfather was the great physicist Seinstein. On the other hand though, Polycarpus has never had an easy time with history.

Everybody knows that the World history encompasses exactly n events: the i-th event had continued from the year a_i to the year b_i inclusive ($a_i < b_i$). Polycarpus easily learned the dates when each of n events started and ended (Polycarpus inherited excellent memory from his great-great-granddad). But the teacher gave him a more complicated task: Polycaprus should know when all events began and ended and he should also find out for each event whether it includes another event. Polycarpus' teacher thinks that an event j includes an event i if $a_j < a_i$ and $b_i < b_j$. Your task is simpler: find the number of events that are included in some other event.

Input

The first input line contains integer n ($1 \le n \le 10^5$) which represents the number of events. Next n lines contain descriptions of the historical events, one event per line. The $i + 1$ line contains two integers a_i and b_i ($1 \le a_i < b_i \le 10^9$) — the beginning and the end of the i-th event. No two events start or finish in the same year, that is, $a_i \ne a_j, a_i \ne b_j, b_i \ne a_j, b_i \ne b_j$ for all i, j (where $i \ne j$). Events are given in arbitrary order.

Output

Print the only integer — the answer to the problem.

Examples

input
5 1 10 2 9 3 8 4 7 5 6
output
4

input
5 1 100 2 50 51 99 52 98 10 60
output
4

input
1 1 1000000000
output
0

Note

In the first example the fifth event is contained in the fourth. Similarly, the fourth event is contained in the third, the third — in the second and the second — in the first.

In the second example all events except the first one are contained in the first.

In the third example only one event, so the answer is 0.