

Problem G. GPA

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 256 mebibytes

In this semester, Alice took n courses. Now, she has finished all the final exams. And she will get her grades in the following n days.

On the i -th day, Alice will know her grade A_i of the i -th course. If A_i is strictly less than the average grade of the first $i - 1$ courses, Alice will be sad on that day.

Now Bob is hacking into the university's database. Bob can choose a set S of courses (S can be empty). And then for each course i in S , he can change Alice's grade from A_i to B_i .

Bob wants to minimize the number of days when Alice will be sad. Now you need to help him to decide which courses' grades he should modify.

Note that Alice will always be happy on the first day.

Input

The first line contains a single integer n ($1 \leq n \leq 4000$).

Then n lines follow. The i -th of these lines contains two integers, A_i and B_i ($0 \leq A_i, B_i \leq 400$).

Output

Output the minimum number of days when Alice will be sad.

Example

standard input	standard output
4	1
1 2	
2 3	
1 2	
1 1	