

Contest Duration: 2025-09-20(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250920T2100&p1=248>) - 2025-09-20(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250920T2240&p1=248>) (local time) (100 minutes)

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C - New Skill Acquired

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

Takahashi is playing a game. This game has N skills numbered 1 through N .

You are given N pairs of integers $(A_1, B_1), \dots, (A_N, B_N)$.

If $(A_i, B_i) = (0, 0)$, then Takahashi has already learned skill i .

Otherwise, Takahashi can learn skill i if and only if at least one of skills A_i and B_i has already been learned.

Including the skills already learned, find the number of skills that Takahashi can ultimately learn.

Constraints

- $1 \leq N \leq 2 \times 10^5$
- $(A_i, B_i) = (0, 0)$ or $1 \leq A_i, B_i \leq N$
- All input values are integers.

Input

The input is given from Standard Input in the following format:

2026-01-02 (Fri)
05:30:22 +11:00

$$\begin{matrix} N \\ A_1 & B_1 \\ A_2 & B_2 \\ \vdots & \\ A_N & B_N \end{matrix}$$

Output

Output the answer.

Sample Input 1

[Copy](#)

```
6
0 0
1 3
3 2
5 5
4 6
6 4
```

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Sample Output 1

[Copy](#)

```
3
```

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At first, Takahashi has already learned skill 1. Because skill 1 has been learned, skill 2 can be learned, and learning skill 2 enables learning skill 3. Since it is impossible to learn skills 4, 5, 6, the answer is 3.

Sample Input 2

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```
4
0 0
0 0
0 0
0 0
```

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Sample Output 2

[Copy](#)

```
4
```

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'#telegram)

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