Message Delivery

Time Limit: 2 Seconds
Memory Limit: 2048 MB

Professor Mattox wants to deliver an important message to all students in his algorithm class. The students are connected through a network of one-directional message delivery relationships. If student A delivers the message to student B, then B will receive the message, but B may not deliver the message back to A unless there is another explicit relationship from B to A.

Given the network of students and their one-directional delivery relationships, help Professor Mattox determine the **minimum number of students** he needs to tell the message directly so that all students in the class eventually receive the message. It is guaranteed that no students deliver to himself or herself.

Input

The first line contains a integer T, which represents the number of testcases below.

In each of the testcase, the first line contains two integers: n (the number of students) and m (the number of one-directional delivery relationships).

The next m lines each contain two integers: b e, representing a one-directional delivery relationship from student b to student e.

The constraints are:

- T the number of testcases, $1 \leq T \leq 100$
- $2 \leq n \leq 2 \times 10^5$: The number of students is between 2 and 2×10^5. Assuming there are multiple testcases, the sum of $n's$ is guanteed to go below 2×10^5.
- $0 \leq m \leq 2 \times 10^5$: The number of delivery relationships is between 0 and 2×10^5.
- Students are numbered from 0 to $n - 1$.
- Delivery relationships can include self-loops (e.g., $b = e$) and duplicate relationships.

Output

Output a single integer: the **minimum number of students** Professor Mattox needs to tell directly so that all students in the class eventually receive the message.

Sample Inputs

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

Sample Outputs

```
2
```

In the sample input: - The students form two strongly connected components: $\{0, 1, 2\}$ and $\{3, 4\}$. - Professor Mattox can tell the message directly to student 0 and student 3. - Student 0 will deliver the message to