Largest Strongly Connected Component

A strongly connected component of a directed graph $G = (V, E)$ is a maximal set of vertices $C \subseteq V$ such that for each pair of vertices $u, v \in C$, there is a path from u to v and v to u. There can be many such components in a graph. Write a program which returns the length of the largest strongly connected component in given graph.

Input Format

First line of each input is a positive integer t for number of test cases. For each test case, first line is a positive integer $|V|$ - number of vertices in the graph G. Followed by a positive integer $|E|$ - number of edges in the graph. Let the vertices of graph G be labeled with $\{0, 1, \ldots, |V| - 1\}$.

Then, each of the next E lines have two space separated positive integers u and v, denoting a directed edge from u to v.

Constraints

- $1 \le t \le 10$

- $1 \le |V| \le 10^5$

- $0 \le |E| \le 10^9$

Output Format

For the input graph return the length of the largest strongly connected component set.

Sample Input 0

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

Sample Output 0

```
5
```

Sample Input 1

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

```
2 0
2 3
```

Sample Output 1

```
3
```