Problem 2. By-pass route (timelimit: 4secs)

Problem Statement

For a given non-weighted **directed** graph $G = (V, E)$, three node numbers s, m, t, find a shortest path of $s \to m \to t$.

Input Statement

First line contains t which is the number of test cases.
The first line of each testcase contains $n(0 < n \leq 100,000), m(0 \leq m \leq 200,000)$. In the next line, we get three node numbers s, m, t.
In the next m lists, we get two numbers u, v, which represents there is an edge from u to v.
All the edges are disjoint to each other.

Output Statement

For each testcase, print the length of the shortest path.
If there is no path, then print -1, instead of the length.

Input Example

```
3
3 2
2 1 0
2 1
1 0 // end of testcase 1
5 6
4 3 1
0 1
1 2
1 3
3 2
2 4
4 1 // end of testcase 2
4 0
0 1 0 // end of testcase 3
```

Output Example

```
2
5
-1
```