Simple Path

Time Limit: 2 Seconds Memory Limit: 65536 KB

A path with no repeated vertices of an undirected graph is called a simple path. Given an undirected graph and two verteices S and D, return the number of vertics which don't lie on any simple paths between S and D.

Input

The input contains multiple test cases.

Each case starts with a line of four integers, N(1 < N ≤ 100), M(1 ≤ M ≤ N(N - 1) / 2), S(0 ≤ S < N), D(0 ≤ D < N). N is the number of vertices, M is the number of edges, S and D are two different vertices. Then M lines follow, each line contains two different integers A(0 ≤ A < N) and B(0 ≤ B < N), which represents an edge of the graph. It's ensure that there is at least one simple path between S and D.

Output

Output the number of such vertics, one line per case.

Sample Input

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

Sample Output

```
1
0
```

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