Problem A
Warehouse

Input file: *testdata.in*
Time limit: 1 second

Problem Description

A chief of a manufacturer is worrying about how to place his warehouses. There are several factories, each located in a town, and there are some roads connecting the towns. Each road starts from and goes to some town and is *uni*-directional. The chief wants to place some warehouses into the towns so that the commodities produced by a factory can be transported to a warehouse within passing through a limited number of roads. Please help him to find the minimal number of warehouses needed.

Technical Specification

- There are $1 \leq N \leq 50$ towns. Each town has a factory. The towns are numbered from 0 to $N - 1$.
- There are M unidirectional roads. Each road starts from one town and goes to one town.
- The maximum number of roads can be passed through while transporting commodities is denoted as K, where $0 \leq K \leq N$.

Input Format

There are several test cases. Each case starts with a line containing three integers: N, M, and K. Following are M lines, each of them contains two

integers, s and t, meaning that there is a road starts from town s and goes to town t.

At the end of input file, there is a single line containing three zeros. This line should not be processed.

Output Format

For each case, please output the minimal number of warehouse needed on its own line.

Sample Input

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

Sample Output

```
1
1
```