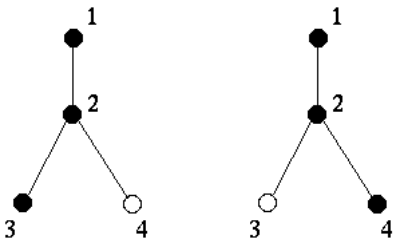
Problem H. Graph

Input file:	`graph.in`
Output file:	`graph.out`
Time limit:	1 second
Memory limit:	256 megabytes

Let's consider undirected graph with N vertices and M edges. How many different ways are there to paint it, if there are only K colours? You need not use all colours in one painting. Two paintings are considered the same if there is such a renumbering of vertices of one painting that leaves the list of edges unchanged, and the colour of its i-th vertex is the same as the colour of i-th vertex of other painting for each i. For example, paintings on picture are the same (renumbering: $1 \to 1, 2 \to 2, 3 \to 4, 4 \to 3$).



Input

First line of input file contains three integer numbers: N, M and K ($1 \le N \le 9$, $1 \le M \le 100$, $1 \le K \le 10$). Next M lines contain two integers each — graph edges. Graph may contain parallel edges and loops. Numbers in lines are separated by spaces.

Output

Output file must contain one integer number K — answer for the task.

Example

graph.in	graph.out
4 3 2 1 2 2 3 2 4	8