

D. A Simple Task

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Given a simple graph, output the number of simple cycles in it. A simple cycle is a cycle with no repeated vertices or edges.

Input

The first line of input contains two integers n and m ($1 \leq n \leq 19$, $0 \leq m$) – respectively the number of vertices and edges of the graph. Each of the subsequent m lines contains two integers a and b , ($1 \leq a, b \leq n$, $a \neq b$) indicating that vertices a and b are connected by an undirected edge. There is no more than one edge connecting any pair of vertices.

Output

Output the number of cycles in the given graph.

Examples

input	
4	6
1	2
1	3
1	4
2	3
2	4
3	4
output	
7	

Note

The example graph is a clique and contains four cycles of length 3 and three cycles of length 4.

Codeforces Beta Round #11

Finished

Practice



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Language: GNU G++11 5.1.0 ▼

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15065505	Dec/28/2015 08:32	Runtime error on test 2

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