Ice Cream

Rasmus and his friends are on vacation in Italy. Since they are suffering from the heat, they decide to buy some ice cream. There are N flavors of ice cream available; flavors are numbered from 1 to N. However, some pairings of flavors should be avoided; otherwise, the taste would be unpleasant. Rasmus wants to know how many ways there are to choose three *different* flavors without any such *impossible pairing*. The order of flavors is not taken into account.

Input

The first line of input contains two non-negative integers N and M, the number of flavors and the number of impossible pairings. Each of the M following lines describes an impossible pairing and contains two different flavor numbers. No impossible pairing will appear twice.

Output

The first and only line of output must contain a single integer: the number of possible choices.

Constraints

$1 \leq N \leq 200$.
$0 \leq M \leq 10\,000$.

Example

Input	Output
5 3 1 2 3 4 1 3	3

There are 5 flavors and 3 impossible pairings. Flavor 1 should be combined with neither flavor 2 nor flavor 3, and flavor 3 also should not be chosen together with flavor 4. Only 3 ways to choose three different flavors remain: (1 4 5), (2 3 5), and (2 4 5).