

## Guarded wall sequences

There are  $N$  outposts on the Great Wall of China. However, only  $M$  of those have guards. The wall between two neighboring posts is guarded if it has guards at least on one of its ends. A guarded wall sequence is a non-expandable sequence of guarded walls.

Write a program that gives the count of guarded wall sequences.

### Input


The first line of the *standard input* contains the count of posts ( $1 \leq N \leq 100$ ), and the count of posts which have guards ( $1 \leq M \leq N$ ). The next  $M$  lines contain the identification numbers of guarded posts ( $1 \leq S_i \leq N$ ). We know that there is at most one guard at each post.

### Output

The first line of the *standard output* should contain the count of guarded wall sequences.

### Example

Input	Output
15 9	2
6	
3	
12	
11	
4	
5	
8	
15	
14	



### Limits

Time limit: 0.1 second

Memory limit: 32 MB

Evaluation: In 40% of tests, the count of data is  $\leq 20$