Cycle Representation

Let n be a fixed integer.

A **permutation** is a bijection from the set $\{1,2,\ldots,n\}$ to itself.

A **cycle of length k** ($k\ge 2$) is a permutation f where different integers exist $i_1,\ldots,i_k$ such that $f(i_1)=i_2, f(i_2)=i_3, \ldots, f(i_k)=i_1$ and, for all x not in $\{i_1,\ldots,i_k\}$, $f(x)=x$.

The **composition of m permutations** $f_1,\ldots,f_m$, written $f_1\circ f_2\circ\ldots\circ f_m$, is their composition as functions.

Steve has some cycles $f_1,f_2,\ldots,f_m$. He knows the length of cycle f_i is l_i, but he does not know exactly what the cycles are. He finds that the composition $f_1\circ f_2\circ\ldots\circ f_m$ of the cycles is a cycle of length n.
He wants to know how many possibilities of $f_1,\ldots,f_m$ exist.

Input Format

The first line contains T, the number of test cases.
Each test case contains the following information:
The first line of each test case contains two space separated integers, n and m.
The second line of each test case contains m integers, $l_1,\ldots,l_m$.

Constraints
$n \geqslant 2$
Sum of $n\leqslant 1000$
$2\leqslant l_i \leqslant n$
Sum of $m\le 10^6$

Output Format

Output T lines. Each line contains a single integer, the answer to the corresponding test case.

Since the answers may be very large, output them modulo (10^9+7).

Sample Input

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1
3 2
2 2
```

Sample Output

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6
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Explanation

There are three cycles of length 2. The composition of two cycles of length 2 is a cycle of length 3 if, and only if, the two cycles are different. So, there are $3\cdot2=6$ possibilities.