UVa Online Judge

10105 Polynomial coefficients

The problem is to calculate the coefficients in expansion of polynomial $(x_1 + x_2 + \ldots + x_k)^n$.

Input

The input will consist of a set of pairs of lines. The first line of the pair consists of two integers n and k separated with space ($0 < K, N < 13$). This integers define the power of the polynomial and the amount of the variables. The second line in each pair consists of k non-negative integers $n_1, \ldots, n_k$, where $n_1 + \ldots + n_k = n$.

Output

For each input pair of lines the output line should consist one integer, the coefficient by the monomial $x_1^{n_1} x_2^{n_2} \ldots x_k^{n_k}$ in expansion of the polynomial $(x_1 + x_2 + \ldots + x_k)^n$.

Sample Input

```
2 2
1 1
2 12
1 0 0 0 0 0 0 0 0 0 1 0
```

Sample Output

```
2
2
```