Given $n$ objects you'd have to tell how many different groups can be chosen if $r$ objects are taken at a time.

## Input

Input consists of 100 test cases. Each test case begins with two integers $n$ $(0 < n \leq 50)$, $m$ $(0 \leq m \leq n)$. The next line will contain the labels (numbers in the range 1 to $n$) of the $n$ objects you are to choose from. Two objects with the same label are considered equivalent. Then in the last line for that test case, you'd have $m$ values for $r$. There will be a single space separating two consecutive numbers in a line. Input is terminated by a test case where $n = 0$, you must not process this test case.

## Output

For each test case, print the test case number. And for each query number $r$, print the number of different groups that can be formed if $r$ objects are taken from the given $n$ objects. You can assume that for all input cases, the output will always fit in a 64-bit unsigned integer and $(0 \leq r \leq n)$.

## Sample Input

```
5 2
1 2 3 4 5
2 1
4 1
1 2 3 4
2
0 0
```

## Sample Output

```
Case 1:
10
5
Case 2:
6
```