Contest Prize

Time Limit – 1 second

Suppose this year there are *K* students to participate in ACM ICPC Dhaka Regional 2015 from your university. So, you arranged a contest at **DevSkill** to find the best from bests. After the completion, every one of the *K* participants can get a rank between 1 to *K*, and there are no two students whose ranks are the same. To enable all the *K* students to participate in the contest, your university decide to distribute scholarship to the *K* participants according to their ranks. At first your university authorities provide *N* scholarship which are the same, and then distribute the *N* scholarships with the rules of this:

1. The number of scholarships the student ranking *i* gets cannot be less than the number of scholarships the student ranking *i* +1 gets.
2. Every student at lest gets one scholarship.
3. At last there is no scholarship left.

If N=4 and K=3, there are only one way to distribute the scholarships: the student ranking 1 gets 2 scholarships, the student ranking 2 gets 1 scholarship, and the student ranking 3 gets 1 scholarship.

Now give the *N* and *K*, you just tell me after the competition, how many different ways to distribute the *N* scholarships to the *K* participants. As the result may be very large, print the result module 1000000009 for the output.

## Input:

The first line of input is the number of test case. For each test case: There is only one line with two integers: *N* (1≤ *N* ≤103) and *K* (1 ≤ *K* ≤ 103)

## Output:

For each test case, output one line containing "Case **x**: “, where **x** is the test case number, followed by the expected answer.

See the sample I/O.

|  |  |
| --- | --- |
| Sample Input | Sample Output |
| 3  4 3  10 3  4029 10 | **Case 1: 1**  **Case 2: 8**  **Case 3: 77017249** |