Permutation Problem

How many n-digit numbers (without leading zeros) are there such that no digit occurs more than k times?

As the count of such n-digit numbers can be very large, print the answer mod (10^9+7)

Input Format

The first line contains an integer, T, the number of test cases. This is followed by T lines each containing 2 space separated integers, n and k

Constraints

$T \le 100000$
$1 \le n \le 1000$
$1 \le k \le 10^9$

Sample Input

```
2
2 3
2 1
```

Sample Output

```
90
81
```

Explanation
Case 1: A number can appear three times. So we have 9 (all except 0) numbers for first digit and 10 numbers for the second digit.
Case 2: A number can appear only once. So we have 9 choices for the first digit and 9(all except the first one) for the second digit.