

1023 – Discovering Permutations

In this problem you have to find the permutations using the first **N** English capital letters. Since there can be many permutations, you have to print the first **K** permutations.

Input

Input starts with an integer **T** (≤ 100), denoting the number of test cases.

Each case contains two integers **N, K** ($1 \leq N \leq 26, 1 \leq K \leq 30$).

Output

For each case, print the case number in a line. Then print the first **K** permutations that contain the first **N** English capital letters in alphabetical order. If there are less than **K** permutations then print all of them.

Sample Input	Output for Sample Input
2 3 8 10 10	Case 1 : ABC ACB BAC BCA CAB CBA Case 2 : ABCDEFGH I J ABCDEFGH J I ABCDEFGH I H J ABCDEFGH I J H ABCDEFGH J H I ABCDEFGH J I H ABCDEFGH G I J ABCDEFGH G J I ABCDEFGH I G J ABCDEFGH I J G