

Permutation Sequence

The set $[1, 2, 3, \dots, n]$ contains a total of $n!$ unique permutations.

By listing and labeling all of the permutations in order, we get the following sequence for $n = 3$:

1. "123"
2. "132"
3. "213"
4. "231"
5. "312"
6. "321"

Given n and k , return the k^{th} permutation sequence.

Example 1:

Input: $n = 3, k = 3$

Output: "213"

Example 2:

Input: $n = 4, k = 9$

Output: "2314"

Example 3:

Input: $n = 3, k = 1$

Output: "123"

Constraints:

- $1 \leq n \leq 9$
- $1 \leq k \leq n!$