The set [1,2,3,...,*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.

**Note:**

* Given *n* will be between 1 and 9 inclusive.
* Given *k* will be between 1 and *n*! inclusive.

**Example 1:**

**Input:** n = 3, k = 3

**Output:** "213"

**Example 2:**

**Input:** n = 4, k = 9

**Output:** "2314"