

## Problem D

There is nothing more beautiful than just an integer number.

You are given an integer  $n$ . Return the smallest integer greater than or equal to  $n$  that contains exactly  $k$  distinct digits in decimal notation.

The first line of the input contains  $t$ , the number of test cases, followed by  $2 \cdot t$  lines. Each test case is represented by two integers  $n$  and  $k$ .

**Restrictions:**

- $1 \leq n \leq 10^{18}$
- $1 \leq k \leq 10$

**Example:**

Input:

1  
47  
1

Output:

55

Here,  $k$  is 1, so we're looking for a number whose digits are all equal. The smallest such number that is greater than or equal to 47 is 55.