

## Problem E

There is nothing more beautiful than just an integer number.

You are given an integer  $n$ . Write down  $n$  in decimal notation with no leading zeroes, and let  $M$  be the number of written digits. Perform the following operation exactly  $k$  times:

- Choose two different 1-based positions,  $i$  and  $j$ , such that  $1 \leq i < j \leq M$ . Swap the digits at positions  $i$  and  $j$ . This swap must not cause the resulting number to have a leading zero, i.e., if the digit at position  $j$  is zero, then  $i$  must be strictly greater than 1.

Return the maximal possible number you can get at the end of this procedure. If it's not possible to perform  $k$  operations, return -1 instead.

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:**

- $1 \leq n \leq 1000000$
- $1 \leq k \leq 10$

**Example:**

Input:

```
1
16375
1
```

Output:

```
76315
```

The optimal way is to swap 1 and 7.