

Removing digits

[English](#)

[Vietnamese](#)

Bom loves arithmetic very much. He is currently examining the numbers formed by writing the prime numbers successively. Accordingly, the n^{th} number of this kind is formed by writing the first, second, ..., and up to n^{th} prime number successively. The first few ones are:

2, 23, 235, 2357, 235711, ...

Bom denotes the n^{th} number in the above sequence by a_n .

Write a program that helps Bom delete k digits from a_n so that the number formed by the remaining digits is maximized.

Input

A single line containing two integers n and k ($1 \leq n \leq 50000$, $k \geq 0$ and k is smaller than the number of digits of a_n).

Output

Print in a single line the maximum number obtained by deleting exactly k digits from a_n .

Example

Input

5 4

Output

71