Project Euler #51: Prime digit replacements



Problem Statement

This problem is a programming version of Problem 51 from projecteuler.net. We highly recommend to solve original first

By replacing the 1^{st} digit of *3, it turns out that six of the nine possible values: 13, 23, 43, 53, 73, and 83, are all prime.

By replacing the 3^{rd} and 4^{th} digits of 56**3 with the same digit, this 5-digit number is the first example having seven primes among the ten generated numbers, yielding the family: 56003, 56113, 56333, 56443, 56663, 56773, and 56993. Consequently 56003, being the first member of this family, is the smallest prime with this property.

Find the smallest N-digit prime which, by replacing K-digits of the number (not necessarily adjacent digits) with the same digit, is part of an L prime value family.

Note1: It is guaranteed that solution does exist. **Note2:** Leading zeros should not be considered.

Input Format

Input contains three integers N, K and L.

Output Format

Print the first L numbers of the prime value family found in increasing order.

Constraints

 $\begin{array}{l} 2 \leq N \leq 7 \\ 1 \leq K \leq N \\ 1 \leq L \leq 8 \end{array}$

Sample Input#00

5 2 7

Sample Output#00

56003 56113 56333 56443 56663 56773 56993

Sample Input#01

2 1 3

Sample Output#01

11 13 17