Project Euler #49: Prime permutations

This problem is a programming version of Problem 49 from projecteuler.net

The arithmetic sequence, $1487, 4817, 8147$ in which each of the terms increases by 3330 is unusual in two ways: (i) each of the three terms are prime, and, (ii) each of the 4-digit numbers are permutations of one another.

There are no arithmetic sequences made up of three $1-$, $2-$, or $3-digit$ primes, exhibiting this property.
You are given N and K, find all K size sequences where first element is less than N and K elements are permutations of each other, are prime and are in AP(Arithmetic Progression).

Print the answer as concatenated integer formed by joining K terms.

Input Format

Input contains two integers N and K

Constraints

$2000 \leq N \leq 1000000$
$3 \leq K \leq 4$

Output Format

Print the answer corresponding to the test case. each in new line in numerically sorted order of smallest value.

Sample Input

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2000 3
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Sample Output

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148748178147
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