

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

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

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

Sample Input

2000 3

Sample Output

148748178147