

Project Euler #47: Distinct primes factors

This problem is a programming version of [Problem 47](#) from [projecteuler.net](#)

The first two consecutive numbers to have two distinct prime factors are:

$$\begin{aligned} 14 &= 2 \times 7 \\ 15 &= 3 \times 5 \end{aligned}$$

The first three consecutive numbers to have three distinct prime factors are:

$$\begin{aligned} 644 &= 2^2 \times 7 \times 23 \\ 645 &= 3 \times 5 \times 43 \\ 646 &= 2 \times 17 \times 19 \end{aligned}$$

Given N find all the K consecutive integers, where first integer is $\leq N$ to have exactly K distinct prime factors. Print the first of these numbers in ascending order.

Input Format

Input contains two integers N and K .

Output Format

Print the answer corresponding to the test case. Print each integer in a new line.

Constraints

$$\begin{aligned} 20 &\leq N \leq 2 \times 10^6 \\ 2 &\leq K \leq 4 \end{aligned}$$

Sample Input#00

20 2

Sample Output#00

14
20

Sample Input#01

644 3

Sample Output

644