

Divisors

Camp IT 2019, Day 1, Available memory 64 MB

01.09.2019 - 08.09.2019

Write down the N -th positive integer that has exactly K distinct prime factors.

Constraints

- $1 \leq N \leq 5 \cdot 10^5$
- $0 \leq K \leq 5$

Input

$N \ K$

Output

In the first line of output print the required number. You can assume that such a number exists.

Example

Wejście	Wyjście
10 1	16
10 2	24
1 3	30