

A. k-rounding

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

For a given positive integer n denote its k -rounding as the minimum positive integer x , such that x ends with k or more zeros in base 10 and is divisible by n .

For example, 4-rounding of 375 is $375 \cdot 80 = 30000$. 30000 is the minimum integer such that it ends with 4 or more zeros and is divisible by 375.

Write a program that will perform the k -rounding of n .

Input

The only line contains two integers n and k ($1 \leq n \leq 10^9$, $0 \leq k \leq 8$).

Output

Print the k -rounding of n .

Examples

input
375 4
output
30000

input
10000 1
output
10000

input
38101 0
output
38101

input
123456789 8
output
123456789000000000