

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

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|---------------|
| input |
| 375 4 |
| output |
| 30000 |

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|---------------|
| input |
| 10000 1 |
| output |
| 10000 |

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|---------------|
| input |
| 38101 0 |
| output |
| 38101 |

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|--------------------|
| input |
| 123456789 8 |
| output |
| 123456789000000000 |