

Problem A. Binomial coefficient

Input file: `stdin`
Output file: `stdout`
Time limit: 1 second
Memory limit: 512 megabytes

Given n, k , calculate $\binom{n}{k} = \frac{n!}{k!(n-k)!} \bmod (2^{32})$.

Input

2 integers n, k ($1 \leq n \leq 10^{18}, 0 \leq k \leq n$).

Output

A single integer denotes the value.

Sample input and output

stdin	stdout
4 2	6
10000000000 5000000000	4209467392