

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

C. Solve Equation

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

You have implemented a sorting algorithm that requires exactly $c * n * lg(n)$ nanoseconds to sort n integers. Here lg denotes the base-2 logarithm.

Given $time$ in nanoseconds, print the largest value of n such that $c \times n \times lg(n) \leq time$.

Input

only one line contains two integers $c, time$ ($1 \leq c \leq 100$), ($1 \leq time \leq 2 \times 10^9$).

Output

print in one line the largest value of n .

Your answer is considered correct if its absolute or relative error does not exceed 10^{-6} . Formally, let your answer be a , and the jury's answer be b . Your answer is accepted if and only if $\frac{|a-b|}{\max(1,|b|)} \leq 10^{-6}$.

Examples

input	Copy
1 8	
output	Copy
4.000000	
input	Copy
2 16	
output	Copy
4.000000	
input	Copy
37 12392342	
output	Copy
23104.999312	
input	Copy
1 2000000000	
output	Copy
76374950.903478	

ICPC Assiut University Training - Standard - Juniors Phase 1

Public

Participant

→ Group Contests

- Standard #5 (Bits , bit-masking)
- Standard #4 (Binary search , two pointers)
- Standard #3 (set , sorting, compare function , map)
- Standard #2 (binary search , stack , queue, deque , priority queue)
- Standard #1 (Frequency , prefix sum , vector , pair ,struct)

Standard #4 (Binary search , two pointers)

Finished

Practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Submit?

Language: GNU G++20 11.2.0 (64 bit, w

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
226661810	Oct/05/2023 00:43	Accepted
226661476	Oct/05/2023 00:38	Accepted
226644674	Oct/04/2023 21:23	Accepted