

A. k-Multiple Free Set

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

A k -multiple free set is a set of integers where there is no pair of integers where one is equal to another integer multiplied by k . That is, there are no two integers x and y ($x < y$) from the set, such that $y = x \cdot k$.

You're given a set of n distinct positive integers. Your task is to find the size of it's largest k -multiple free subset.

Input

The first line of the input contains two integers n and k ($1 \leq n \leq 10^5$, $1 \leq k \leq 10^9$). The next line contains a list of n distinct positive integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^9$).

All the numbers in the lines are separated by single spaces.

Output

On the only line of the output print the size of the largest k -multiple free subset of $\{a_1, a_2, \dots, a_n\}$.

Examples

input	Copy
6 2 2 3 6 5 4 10	
output	Copy
3	

Note

In the sample input one of the possible maximum 2-multiple free subsets is {4, 5, 6}.

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Round #168 (Div. 1)

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](#)

→ Clone Contest to Mashup

You can clone this contest to a mashup.

[Clone Contest](#)

→ Submit?

 Language: GNU G++11 5.1.0

 Choose file: Choose File No file chosen

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

[Submit](#)

[→ Problem tags](#)

binary search greedy sortings *1500
No tag edit access

[→ Contest materials](#)

- Announcement ☐
- Tutorial (en) ☐

[Codeforces](#) (c) Copyright 2010-2020 Mike Mirzayanov
The only programming contests Web 2.0 platform
Server time: Nov/06/2020 17:44:17^{UTC+5.5} (g2).
Desktop version, switch to [mobile version](#).
[Privacy Policy](#)

Supported by



ITMO UNIVERSITY