



Hello, 2024101067.

# Weird Subarray

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Alex is analyzing sequences of numbers and trying to find patterns in them. One day, he came across a problem where he needed to find the longest contiguous subarray that meets a special condition.

Given an array consisting of **N** positive integers and an integer **X**, Alex needs to determine the largest **K** such that there exists a subarray of length **K**, where **every element** in the subarray is **greater than**  $X / K$ .

Help Alex solve this problem! If no such subarray exists, return **-1**.

## Input Format

- The first line contains an integer **T** denoting the number of testcases.
- The second line contains two space-separated integers **N** (the size of the array) and **X**.
- The third line contains **N** space-separated positive integers representing the array **A**:

 $A[1], A[2], \dots, A[N]$ .

## Output Format

- Print a single integer representing the largest **K** satisfying the given condition, or **-1** if no such subarray exists.

## Constraints

### Batch 1 [10 points]:

- $1 \leq T \leq 10$
- $1 \leq N \leq 2 \cdot 10^3$
- $1 \leq A[i] \leq 10^9$
- $1 \leq X \leq 10^9$





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- $1 \leq T \leq 10$
- $1 \leq N \leq 10^5$
- $1 \leq A[i] \leq 10^9$
- $1 \leq X \leq 10^9$
- It is guaranteed that the sum of N over all test cases does not exceed  $10^6$

## Example

### Input:

```
1
4 10
3 3 8 4
```

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### Output:

```
4
```

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### Explanation:

The given array is  $[3, 3, 8, 4]$  and  $X = 10$ . Consider the subarray  $[3, 3, 8, 4]$ . All elements in this subarray are  $> 2.5$  ( $10 / 4$ ). Hence, this subarray is a valid answer and its length is the largest. There are no other valid subarrays.

## ? Clarifications

[Request clarification](#)

No clarifications have been made at this time.