



# P-sequences

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We call a sequence of  $N$  natural numbers  $(a_1, a_2, \dots, a_N)$  a *P-sequence*, if the product of any two adjacent numbers in it is not greater than  $P$ . In other words, if a sequence  $(a_1, a_2, \dots, a_N)$  is a *P-sequence*, then  $a_i * a_{i+1} \leq P \quad \forall 1 \leq i < N$

You are given  $N$  and  $P$ . Your task is to find the number of such *P-sequences* of  $N$  integers modulo  $10^9+7$ .

## Input Format

The first line of input consists of  $N$

The second line of the input consists of  $P$ .

## Constraints

$$2 \leq N \leq 10^3$$

$$1 \leq P \leq 10^9$$

$$1 \leq a_i$$

## Output Format

Output the number of *P-sequences* of  $N$  integers modulo  $10^9+7$ .

## Sample Input

```
2
2
```

## Sample Output

```
3
```

## Explanation

3 such sequences are  $\{1,1\}, \{1,2\}$  and  $\{2,1\}$

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Max Score: 100

Difficulty: Hard

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Current Buffer (saved locally, editable)

Java 7



```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
9     public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

 [Upload Code as File](#) ☐ Test against custom input

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