



Boba Experiment Again

Problem Statement

Oski is running his boba experiment again at his magical confectionery lab. His workbench holds exactly N jars, where the i -th jar initially contains A_i pieces of boba, each having a completely different flavor. All flavors across all initial jars are completely unique, meaning no two jars share any of the same flavors.

In each step, Oski creates a new jar of bobas. Whenever he selects a boba flavor from any jar on his workbench, the boba will magically clone itself, ensuring the bobas in the current jars are never depleted.

For every possible combination of choosing exactly one boba flavor from each jar on the workbench, Oski fuses the chosen flavors into a brand-new boba and places it in a new jar. To make room for this massive new jar on his workbench, he then discards the jar with **the fewest bobas**. If multiple jars are tied, he discards any of them.

After performing this experiment exactly K times, Oski takes the very last jar he created and wants to distribute all of its bobas equally among a number of identical serving cups, leaving no bobas behind. How many different valid number of cups can he choose to split the bobas perfectly? Since the answer can be very large, output it modulo $10^9 + 7$.

Input Format

The first line contains two integers N and K ($1 \leq N \leq 100$, $1 \leq K \leq 10^9$), representing the initial number of jars and the number of times Oski performs the experiment.

The second line contains N space-separated integers $A_1, A_2, \dots, A_N$ ($1 \leq A_i \leq 10^6$), representing the initial number of bobas in each jar.

Output Format

Print a single integer representing the number of different valid numbers of cups Oski can choose, modulo $10^9 + 7$.

Sample Input 1

```
2 1
3 2
```

Sample Output 1

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4
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Explanation of Sample 1

Initially, the workbench holds 2 jars containing 3 and 2 bobas, respectively.

Let the flavors in the first jar be P , Q , and R , and the flavors in the second jar be X and Y .

In the first step, Oski explores every possible combination by taking exactly one boba from each jar. He can form 6 combinations: (P, X) , (P, Y) , (Q, X) , (Q, Y) , (R, X) , and (R, Y) . Therefore, the new jar gains 6 bobas.

To make room for it on the workbench, the jar with the fewest bobas (the one with 2 bobas) is thrown out.

Since $K = 1$, the experiment ends here. Oski takes the newly created jar which contains 6 bobas and wants to distribute them evenly into cups. He can pour them into 1 cup of 6 bobas, 6 cups of 1 boba, 2 cups of 3 bobas, or 3 cups of 2 bobas. This gives a total of 4 ways to split them evenly.

Sample Input 2

```
5 3
2 1 4 2 3
```

Sample Output 2

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80
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