

F. Group Projects

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

There are n students in a class working on group projects. The students will divide into groups (some students may be in groups alone), work on their independent pieces, and then discuss the results together. It takes the i -th student a_i minutes to finish his/her independent piece.

If students work at different paces, it can be frustrating for the faster students and stressful for the slower ones. In particular, the *imbalance* of a group is defined as the maximum a_i in the group minus the minimum a_i in the group. Note that a group containing a single student has an imbalance of 0. How many ways are there for the students to divide into groups so that the total imbalance of all groups is at most k ?

Two divisions are considered distinct if there exists a pair of students who work in the same group in one division but different groups in the other.

Input

The first line contains two space-separated integers n and k ($1 \leq n \leq 200$, $0 \leq k \leq 1000$) — the number of students and the maximum total imbalance allowed, respectively.

The second line contains n space-separated integers a_i ($1 \leq a_i \leq 500$) — the time it takes the i -th student to complete his/her independent piece of work.

Output

Print a single integer, the number of ways the students can form groups. As the answer may be large, print its value modulo $10^9 + 7$.

Examples

input
3 2 2 4 5
output
3

input
4 3 7 8 9 10
output
13

input
4 0 5 10 20 21
output
1

Note

In the first sample, we have three options:

- The first and second students form a group, and the third student forms a group. Total imbalance is $2 + 0 = 2$.

- The first student forms a group, and the second and third students form a group. Total imbalance is $0 + 1 = 1$.
- All three students form their own groups. Total imbalance is 0.

In the third sample, the total imbalance must be 0, so each student must work individually.