Cows in a Skyscraper

A little known fact about Bessie and friends is that they love stair climbing races. A better known fact is that cows really don't like going down stairs. So after the cows finish racing to the top of their favorite skyscraper, they had a problem. Refusing to climb back down using the stairs, the cows are forced to use the elevator in order to get back to the ground floor.

The elevator has a maximum weight capacity of W ($1 \leq W \leq 100\,000\,000$) pounds and cow i weighs C_i ($1 \leq C_i \leq W$) pounds. Please help Bessie figure out how to get all the N ($1 \leq N \leq 18$) of the cows to the ground floor using the least number of elevator rides. The sum of the weights of the cows on each elevator ride must be no larger than W.

Input

- Line 1: N and W separated by a space.

- Lines $2 \ldots N + 1$: Line $i + 1$ contains the integer C_i, giving the weight of one of the cows.

Output

- Line 1: A single integer, R, indicating the minimum number of elevator rides needed.

- Lines $2 \ldots R + 1$: Each line describes the set of cows taking one of the R trips down the elevator. Each line starts with an integer giving the number of cows in the set, followed by the indices of the individual cows in the set.

Sample

Input	Output
4 10 5 6 3 7	3 2 1 3 1 2 1 4

Input explanation

There are four cows weighing 5, 6, 3, and 7 pounds. The elevator has a maximum weight capacity of 10 pounds.

Output explanation

We can put the cow weighing 3 on the same elevator as any other cow but the other three cows are too heavy to be combined. For the solution above, elevator ride 1 involves cow #1 and #3, elevator ride 2 involves cow #2, and elevator ride 3 involves cow #4. Several other solutions are possible for this input.