

Problem E. Mirror Rice Cake

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

Mirror Rice Cake (a stack of rice cakes) is a famous Japanese food that is used for celebrating a new year.

Snuke has N rice cakes to create a Mirror Rice Cake. The weight of the i -th rice cake is a_i . He wants to create a Mirror Rice Cake by choosing some of these rice cakes and stacking them in some order. Additionally, it must satisfy the following constraint: for each rice cake in the stack, the total weight of all rice cakes above it must be strictly smaller than its own weight.

Compute the maximum possible number of rice cakes he can use to create a Mirror Rice Cake.

Input

First line of the input contains one integer N ($1 \leq N \leq 1000$). Each of next N lines contains weight a_i of the i -th rice cake ($1 \leq a_i \leq 10^9$).

Output

Print the maximum possible number of rice cakes Snuke can use to create a Mirror Rice Cake.

Example

standard input	standard output
5 3 20 5 8 6	3

Note

For example, stack three rice cakes of sizes 3, 5, 20 from top to bottom.