

Mars

SEASON 6 – ROUND FOUR – 50 points



Ivancho Musk has taken up the difficult task of sending the first humans to Mars! Sending people to Mars is very expensive though, and the space ship can only carry a limited amount of cargo into space. This is why the selection process is vital. Ivancho wants to send as many people as possible to Mars. Help him, by finding the maximum amount of people the ship can carry in one flight.

Input

The first row of the file `mars.in` contains two positive integers **N** and **M** – the number of volunteers for the mission and the maximum capacity of the spaceship, respectively.

The next row contains **N** space separated integers - the weight of each individual volunteer.

Output

In the output file `mars.out` print a single integer – the maximum amount of people which can be carried to Mars by the space ship in one flight.

Constraints

$$3 \leq N \leq 3000$$

$$1 \leq M \leq 420000$$

$$40 \leq \text{Weight of person} \leq 200$$

Time limit: 0.5 sec

Memory limit: 256 MB

Example test

Input (<code>mars.in</code>)	Output (<code>mars.out</code>)
5 480 148 84 195 132 44	4
3 131 198 83 123	1

Clarifications

Example 1: The total capacity is 480. We can take, for example, 148, 84, 195, 44. We can easily check that we cannot take all 5. Therefore the maximum is 4.

Example 2: We can take either 83 or 123. The maximum is 1.