

Task. Luggage

The organizers of an expedition should carry luggage with total weight of S kilograms to the base camp. They will use containers of N different capacities, the smallest being 1 kilogram. They have an unlimited amount for any type of containers. The cost they have to pay depends on the number the containers, not their capacity, so they want to select the containers, so that their amount to be minimum. Write program **luggage** that determines the minimum amount of containers, so that each container to be fully loaded.

Input: The first line of the standard input contains integers S and N separated by a space. The second line contains N different numbers, separated by spaces – the capacities (in kilograms) of different containers. One of these numbers is equal to 1.

Output: One integer equal to the found minimum amount.

Constraints:

$$0 < S \leq 10000$$

$$0 < N \leq 100$$

Example 1

Input

```
22 5
1 4 8 12 15
```

Output

```
4
```

Example 2

Input

```
1000 7
2 12 11 1 14 18 30
```

Output

```
35
```