

## Novel 2

Readers are waiting for a new novel which contains  $N$  chapters. Publisher want to print the novel in  $K$  volumes. He wants the size of the largest volume to be as small as possible, but he can not change the order of the chapters. Help publisher.

### Input

In the first line contains  $n$  and  $k$  ( $1 \leq n \leq 1000$ ,  $1 \leq k \leq 100$ ). The next line contains the sequence of  $n$  integers (chapters' sizes).

### Output

Output contains the size of the least possible largest volume.

### Sample input

```
5 2
1 3 2 4 3
```

### Sample output

```
7
```