CODEFORCES
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HOME   TOP   CONTESTS   GYM   PROBLEMSET   GROUPS   RATING   EDU   API   CALENDAR   HELP

PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   STANDINGS   CUSTOM INVOCATION

D. Witches Cauldron I

time limit per test: 1.5 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Double double, toil and trouble... The Weird Sisters are heating ingredients for a new concoction to mix into a big mixing pot, but their cauldron for heating recently broke! They have a list of essences to throw into a cauldron to heat **in order**, but they only have time to heat the cauldron a certain number of times before they need to cast their spell. Each essence needs to be fully in the cauldron (i.e. cannot be split), and all essences are in liquid form.

The Weird Sisters need to purchase a cauldron big enough to finish the spell in time, but are still economical. Can you help them find the smallest size of cauldron that will help them finish in time?

Input

First line of input are two integers $1 \le n \le 5 \cdot 10^5$ and $1 \le k \le 10^6$, the number of essences that must be heated and the number of times they can heat respectively.

The next line contains n integers, the volume of each essence $1 \le a_i \le 10^6$ in order that needs to be heated.

Output

One integer v, the volume of cauldron needed to finish heating in k rounds.

Examples

input	Copy

UTPC Contest 10-15-21 Div. 2 (Beginner)

Finished

Practice

⭐

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.
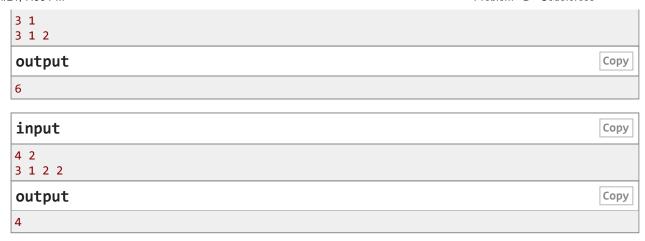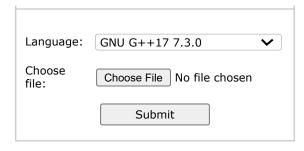
Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

```
3 1
3 1 2
```

output Copy

```
6
```

input Copy

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

output Copy

```
4
```

Language: GNU G++17 7.3.0

Choose
file: Choose File No file chosen

Submit

→ **Last submissions**

Submission	Time	Verdict
134350931	Nov/05/2021 01:43	**Accepted**
134350274	Nov/05/2021 01:21	Wrong answer on test 16
134350009	Nov/05/2021 01:12	Wrong answer on test 16
134344932	Nov/04/2021 23:09	Wrong answer on test 16
134343711	Nov/04/2021 22:45	Wrong answer on test 3
133563226	Oct/30/2021 07:43	Wrong answer on test 3
133560663	Oct/30/2021 06:58	Time limit exceeded on test 3