CODE FORCES
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HOME   TOP   CONTESTS   GYM   **PROBLEMSET**   GROUPS   RATING   API   CALENDAR   HELP   10 YEARS! 🎁

PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

A. Mafia

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

One day n friends gathered together to play "Mafia". During each round of the game some player must be the supervisor and other $n - 1$ people take part in the game. For each person we know in how many rounds he wants to be a player, not the supervisor: the i-th person wants to play a_i rounds. What is the minimum number of rounds of the "Mafia" game they need to play to let each person play at least as many rounds as they want?

Input
The first line contains integer n ($3 \le n \le 10^5$). The second line contains n space-separated integers $a_1, a_2, ..., a_n$ ($1 \le a_i \le 10^9$) — the i-th number in the list is the number of rounds the i-th person wants to play.

Output
In a single line print a single integer — the minimum number of game rounds the friends need to let the i-th person play at least a_i rounds.

Please, do not use the `%lld` specifier to read or write 64-bit integers in C++. It is preferred to use the `cin`, `cout` streams or the `%I64d` specifier.

Examples

input	Copy
3 3 2 2	

output	Copy
4	

input	Copy
4 2 2 2 2	

output	Copy
3	

Note
You don't need to know the rules of "Mafia" to solve this problem. If you're curious, it's a game Russia got from the Soviet times:
`http://en.wikipedia.org/wiki/Mafia_(party_game)`.

Codeforces Round #202 (Div. 1)
Finished

→ 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

→ Problem tags
binary search   math   sortings   *1600
No tag edit access

→ Contest materials
- Announcement   ✕
- Tutorial   ✕

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