## Problem N. Factory Machines

**Time limit** 1000 ms
**Mem limit** 524288 kB

A factory has $n$ machines which can be used to make products. Your goal is to make a total of $t$ products.

For each machine, you know the number of seconds it needs to make a single product. The machines can work simultaneously, and you can freely decide their schedule.

What is the shortest time needed to make $t$ products?

### Input

The first input line has two integers $n$ and $t$: the number of machines and products.

The next line has $n$ integers $k_1, k_2, \ldots, k_n$: the time needed to make a product using each machine.

### Output

Print one integer: the minimum time needed to make $t$ products.

### Constraints

- $1 \leq n \leq 2 \cdot 10^5$
- $1 \leq t \leq 10^9$
- $1 \leq k_i \leq 10^9$

### Example

| Input | Output |
| --- | --- |
| 3 7<br>3 2 5 | 8 |

Explanation: Machine 1 makes two products, machine 2 makes four products and machine 3 makes one product.