Factory Machines
Problem ID: factorymachines1620

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

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

Sample Input 1

<table>
<thead>
<tr>
<th>Sample Input 1</th>
<th>Sample Output 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 7</td>
<td>8</td>
</tr>
<tr>
<td>3 2 5</td>
<td></td>
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</tbody>
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