Problem D
Jim's Magical Coffee Spill II

Time limit: **3 seconds**
Memory limit: **1024 megabytes**

Problem Description

After successfully covering all the coffee stains last time, Jim accidentally knocked over another cup of magical Java coffee.

This time, the coffee did not form stains – instead, each tile on the floor now contains a certain amount of spilled coffee.

Luckily, Jim found a box of magical sponges.

Each sponge can absorb coffee from one continuous segment of tiles, and it absorbs tiles from left to right while the amount of absorbed coffee is less than the sponge's capacity.

- Jim may use as many sponges as he wants.
- Each sponge has the same capacity.
- Jim must absorb all the coffee on the floor.

Your task is to compute the minimum number of sponges Jim needs.

Input Format

Your program reads from standard input. The first line contains an integer T, the number of test cases. For each test case, the first line contains two integers n and C representing the number of tiles and the capacity of each sponge. The second line contains n integers, each representing the coffee amount on a tile. Each amount is between 0 and 10^4.

Notice that once the next tile in the sequence cannot be added to the current sponge (because it would exceed C), Jim discards this sponge. He then takes a new sponge and starts cleaning from that tile.

Output Format

For each test case, output one integer representing the minimum number of sponges Jim must use.

Technical Specification

- $1 \leq T \leq 50$
- $1 \leq n \leq 2 \times 10^5$
- $0 \leq$ coffee amount per tile $\leq 10^4$
- $1 \leq C \leq 10^9$

- You can assume that coffee amount per tile must less than or equal to C.

Sample Input 1

```
1
5 7
2 4 3 2 2
```

Sample Output 1

```
2
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