# Problem G. Sort

Time limit: 1s

Color of balloons: 32768K

Recently, Bob has just learnt a naive sorting algorithm: merge sort. Now, Bob receives a task from Alice. Alice will give Bob $N$ sorted sequences, and the $i$-th sequence includes $a_i$ elements. Bob need to merge all of these sequences. He can write a program, which can merge no more than $k$ sequences in one time. The cost of a merging operation is the sum of the length of these sequences. Unfortunately, Alice allows this program to use no more than $T$ cost. So Bob wants to know the smallest $k$ to make the program complete in time.

## Input

The first line of input contains an integer $t_0$, the number of test cases. $t_0$ test cases follow. For each test case, the first line consists two integers $N$ ($2 \leq N \leq 100000$) and $T$ ($\sum_{i=1}^{N} a_i < T < 2^{31}$). In the next line there are $N$ integers $a_1, a_2, a_3, ..., a_N (\forall i, 0 \leq a_i \leq 1000)$.

## Output

For each test cases, output the smallest $k$.

## Sample

| standard input | standard output |
|---|---|
| 1<br>5 25<br>1 2 3 4 5 | 3 |