GD6: First-Come-First-Serve with deadline (6 sec)

[Optional]

**問題描述 :**

There are N jobs to be processed, where N<100,000, and these jobs must be completed before a given deadline. The CEO wants to buy more machines to meet the deadline requirement. A job cannot be partitioned and must be processed in one machine. The i-th job takes t(i) time no matter which machine you choose to process it. An important principle is first-come-first-serve. Suppose that the jobs have been sorted by their incoming time. For i<j, job j cannot start before the time that job i starts. Given a deadline, write a program to compute the minimum number of machines to complete all the jobs in time.

**輸入說明:**

The input consists of a number of test cases. The first line is an integer T which is the number of test cases, and the test cases follow one by one. The input of a test case consists of two lines. The first line contains two integers N and D, which are the number of jobs and the deadline, respectively. The second line consists of N integers, which are t(0), t(1),…,t(N-1). Any two consecutive numbers in the same line are separated by a space. You can assume that all the input and output numbers in this problem are 32-bit integers.

**輸出說明:**

Output the minimum number of machines to complete all the jobs in time in one line. If it is impossible, output -1.

**範例:**

|  |  |
| --- | --- |
| **Sample Input:** | **Sample Output:** |
| 2  5 8  2 3 1 5 4  4 5  5 5 2 6 4 | 2  -1 |