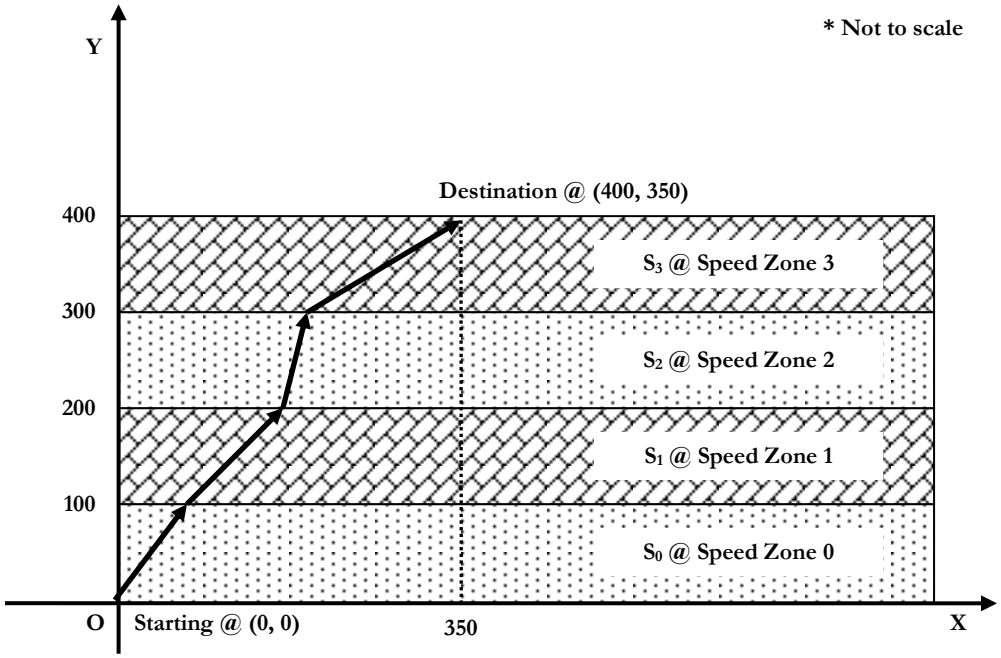
1391 – Speed Zones

Suppose you are in a **2-Dimensional** world. Now, you are in a system of **'N'** parallel zones of **same** or **different speed**, numbered from **0** to **N-1**. In each zone you can move in some given constant speed (S_i amount per second in i^{th} zone) at any direction. Each zone is parallel to **X** axis, starting from the **X** axis (and then on the positive **X** and positive **Y** part only). Width of each zone is **100** (along the **Y** axis).

You are currently in the origin (**0**, **0**). You need to reach (**100*N**, **D**) coordinate. But, you want to do that in minimum possible time (seconds).

Here is an example with **N = 4**, and **D = 350**. The arrows show **a possible path** from **(0, 0)** to **(400, 350)**. Note that after the end of each zone (except the last one), it is possible that you may be in an **non-integer 'X'** coordinate.



Given **N**, **D**, and the speeds $S_0, S_1, S_2, ..., S_{N-1}$ you will need to find the minimum possible time in seconds to reach the destination point.

Input

Input starts with an integer **T (≤ 50)**, denoting the number of test cases.

Each case contains two lines. In the **first** line you will be given two integers **N** (**1 ≤ N ≤ 100**) and **D** (**0 ≤ D ≤ 10000**). In the **second** line you will be given **N** integers, the speeds, in the order: $S_0, S_1, S_2, ..., S_{N-1}$. You can assume that $1 \le S_i \le 1000$ for all $0 \le i < N$.

Output

For each case, print the case number and the minimum possible time in seconds. Error less than 10^{-6} will be ignored.

Sample Input	Output for Sample Input
2 1 0 50 3 400 10 10 10	Case 1: 2 Case 2: 50.00000000