

Minimum Speed to Arrive on Time

You are given a floating-point number *hour*, representing the amount of time you have to reach the office. To commute to the office, you must take *n* trains in sequential order. You are also given an integer array *dist* of length *n*, where *dist[i]* describes the distance (in kilometers) of the *i*th train ride.

Each train can only depart at an integer hour, so you may need to wait in between each train ride.

- For example, if the 1st train ride takes 1.5 hours, you must wait for an additional 0.5 hours before you can depart on the 2nd train ride at the 2 hour mark.

Return the **minimum positive integer speed (in kilometers per hour)** that all the trains must travel at for you to reach the office on time, or -1 if it is impossible to be on time.

Tests are generated such that the answer will not exceed 10^7 and *hour* will have **at most two digits after the decimal point**.

Example 1:

Input: *dist* = [1,3,2], *hour* = 6

Output: 1

Explanation: At speed 1:

- The first train ride takes $1/1 = 1$ hour.
- Since we are already at an integer hour, we depart immediately at the 1 hour mark. The second train takes $3/1 = 3$ hours.
- Since we are already at an integer hour, we depart immediately at the 4 hour mark. The third train takes $2/1 = 2$ hours.
- You will arrive at exactly the 6 hour mark.

Example 2:

Input: *dist* = [1,3,2], *hour* = 2.7

Output: 3

Explanation: At speed 3:

- The first train ride takes $1/3 = 0.33333$ hours.
- Since we are not at an integer hour, we wait until the 1 hour mark to depart. The second train ride takes $3/3 = 1$ hour.
- Since we are already at an integer hour, we depart immediately at the 2 hour mark. The third train takes $2/3 = 0.66667$ hours.
- You will arrive at the 2.66667 hour mark.

Example 3:

Input: dist = [1,3,2], hour = 1.9

Output: -1

Explanation: It is impossible because the earliest the third train can depart is at the 2 hour mark.

Constraints:

- $n == \text{dist.length}$
- $1 \leq n \leq 10^5$
- $1 \leq \text{dist}[i] \leq 10^5$
- $1 \leq \text{hour} \leq 10^9$
- There will be at most two digits after the decimal point in hour.