5764. Minimum Speed to Arrive on Time

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User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

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 1^{st} train ride takes `1.5` hours, you must wait for an additional `0.5` hours before you can depart on the 2^{nd} 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
- Since we are already at an integer hour, we depart immediately at the 4 hour mark. The third train takes 2/1
- 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
- Since we are already at an integer hour, we depart immediately at the 2 hour mark. The third train takes 2/3
- 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 == dist.length`
- `1 <= n <= 10^5`
- `1 <= dist[i] <= 10^5`
- `1 <= hour <= 10^9`
- There will be at most two digits after the decimal point in `hour`.