

5692. Car Fleet II

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There are n cars traveling at different speeds in the same direction along a one-lane road. You are given an array `cars` of length n , where `cars[i] = [positioni, speedi]` represents:

- position_i is the distance between the i^{th} car and the beginning of the road in meters. It is guaranteed that $\text{position}_i < \text{position}_{i+1}$.
- speed_i is the initial speed of the i^{th} car in meters per second.

For simplicity, cars can be considered as points moving along the number line. Two cars collide when they occupy the same position. Once a car collides with another car, they unite and form a single car fleet. The cars in the formed fleet will have the same position and the same speed, which is the initial speed of the **slowest** car in the fleet.

Return an array `answer`, where `answer[i]` is the time, in seconds, at which the i^{th} car collides with the next car, or `-1` if the car does not collide with the next car. Answers within 10^{-5} of the actual answers are accepted.

User Accepted:	4
User Tried:	15
Total Accepted:	4
Total Submissions:	25
Difficulty:	Hard

Example 1:

Input: cars = [[1,2],[2,1],[4,3],[7,2]]

Output: [1.00000,-1.00000,3.00000,-1.00000]

Explanation: After exactly one second, the first car will collide with the second car, and form a car fleet with speed 1 m/s. After exactly

Example 2:

Input: cars = [[3,4],[5,4],[6,3],[9,1]]

Output: [2.00000,1.00000,1.50000,-1.00000]

Constraints:

- $1 \leq \text{cars.length} \leq 10^5$
- $1 \leq \text{position}_i, \text{speed}_i \leq 10^6$
- $\text{position}_i < \text{position}_{i+1}$

JavaScript



```
1 /**  
2  * @param {number[][]} cars  
3  * @return {number[]}  
4  */  
5 var getCollisionTimes = function(cars) {  
6  
7 };
```

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