

## 5801. Eliminate Maximum Number of Monsters

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You are playing a video game where you are defending your city from a group of  $n$  monsters. You are given a **0-indexed** integer array `dist` of size  $n$ , where `dist[i]` is the **initial distance** in meters of the  $i^{\text{th}}$  monster from the city.

The monsters walk toward the city at a **constant** speed. The speed of each monster is given to you in an integer array `speed` of size  $n$ , where `speed[i]` is the speed of the  $i^{\text{th}}$  monster in meters per minute.

The monsters start moving at **minute 0**. You have a weapon that you can **choose** to use at the start of every minute, including minute 0. You cannot use the weapon in the middle of a minute. The weapon can eliminate any monster that is still alive. You lose when any monster reaches your city. If a monster reaches the city **exactly** at the start of a minute, it counts as a **loss**, and the game ends before you can use your weapon in that minute.

Return the **maximum** number of monsters that you can eliminate before you lose, or  $n$  if you can eliminate all the monsters before they reach the city.

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

## Example 1:

**Input:** `dist = [1,3,4]`, `speed = [1,1,1]`**Output:** 3**Explanation:**

At the start of minute 0, the distances of the monsters are [1,3,4], you eliminate the first monster.  
 At the start of minute 1, the distances of the monsters are [X,2,3], you don't do anything.  
 At the start of minute 2, the distances of the monsters are [X,1,2], you eliminate the second monster.  
 At the start of minute 3, the distances of the monsters are [X,X,1], you eliminate the third monster.  
 All 3 monsters can be eliminated.

## Example 2:

**Input:** `dist = [1,1,2,3]`, `speed = [1,1,1,1]`**Output:** 1**Explanation:**

At the start of minute 0, the distances of the monsters are [1,1,2,3], you eliminate the first monster.  
 At the start of minute 1, the distances of the monsters are [X,0,1,2], so you lose.  
 You can only eliminate 1 monster.

## Example 3:

**Input:** `dist = [3,2,4]`, `speed = [5,3,2]`**Output:** 1**Explanation:**

At the start of minute 0, the distances of the monsters are [3,2,4], you eliminate the first monster.  
 At the start of minute 1, the distances of the monsters are [X,0,2], so you lose.  
 You can only eliminate 1 monster.

## Constraints:

- $n == \text{dist.length} == \text{speed.length}$
- $1 \leq n \leq 10^5$
- $1 \leq \text{dist}[i], \text{speed}[i] \leq 10^5$

JavaScript



```
1  /**
2   * @param {number[]} dist
3   * @param {number[]} speed
4   * @return {number}
5   */
6  var eliminateMaximum = function(dist, speed) {
7
8  };
```

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