

5703. Maximum Average Pass Ratio

My Submissions (/contest/weekly-contest-232/problems/maximum-average-pass-ratio/submissions/)

Back to Contest (/contest/weekly-contest-232/)

There is a school that has classes of students and each class will be having a final exam. You are given a 2D integer array `classes`, where `classes[i] = [passi, totali]`. You know beforehand that in the i^{th} class, there are `totali` total students, but only `passi` number of students will pass the exam.

You are also given an integer `extraStudents`. There are another `extraStudents` brilliant students that are **guaranteed** to pass the exam of any class they are assigned to. You want to assign each of the `extraStudents` students to a class in a way that **maximizes** the **average** pass ratio across **all** the classes.

The **pass ratio** of a class is equal to the number of students of the class that will pass the exam divided by the total number of students of the class. The **average pass ratio** is the sum of pass ratios of all the classes divided by the number of the classes.

Return the **maximum** possible average pass ratio after assigning the `extraStudents` students. Answers within 10^{-5} of the actual answer will be accepted.

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

Example 1:

Input: `classes = [[1,2],[3,5],[2,2]]`, `extraStudents = 2`

Output: `0.78333`

Explanation: You can assign the two extra students to the first class. The average pass ratio will be equal to $(3/4 + 3/5 + 2/2)$

Example 2:

Input: `classes = [[2,4],[3,9],[4,5],[2,10]]`, `extraStudents = 4`

Output: `0.53485`

Constraints:

- $1 \leq \text{classes.length} \leq 10^5$
- $\text{classes}[i].\text{length} == 2$
- $1 \leq \text{pass}_i \leq \text{total}_i \leq 10^5$
- $1 \leq \text{extraStudents} \leq 10^5$

JavaScript

📄 ↺ ⚙

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

☐ Custom Testcase

Use Example Testcases