

Recently, paleoanthropologists have found historical remains on an island in the Atlantic Ocean. The most inspiring thing is that they excavated in a magnificent cave and found that it was a huge tomb. Inside the construction, researchers identified a large number of skeletons, and funeral objects including stone axe, livestock bones and murals. Now, all items have been sorted, and they can be divided into N types. After they were checked attentively, you are told that there are A_i items of the i -th type. Further more, each item of the i -th type requires B_i million dollars for transportation, analysis, and preservation averagely. As your job, you need to calculate the total expenditure.

Input

The first line of input contains an integer T which is the number of test cases.

For each test case, the first line contains an integer N which is the number of types. In the next N lines, the i -th line contains two numbers A_i and B_i as described above. All numbers are positive integers and less than 101.

Output

For each case, output one integer, the total expenditure in million dollars, on a line by itself.

Sample Input

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1
2
1 2
3 4
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Sample Output

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14
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