Problem E: Class Schedule

At Fred Hacker's school, there are $T \times C$ classes, divided into C catagories of T classes each. The day begins with all the category 1 classes being taught simultaneously. These all end at the same time, and then all the category 2 classes are taught, etc. Fred has to take exactly one class in each category. His goal is to choose the set of classes that will minimize the amount of ``energy'' required to carry out his daily schedule.

The energy requirement of a schedule is the sum of the energy requirement of the classes themselves, and energy consumed by moving from one class to the next through the schedule.

More specifically, taking the jth class in the ith category uses E_{ij} units of energy. The rooms where classes take place are located at integer positions (ranging from 0 to L) along a single hallway. The jth class in the ith category is located at position P_{ij}. Fred starts the day at position 0, moves from class to class, according to his chosen schedule, and finally exits at location L. Moving a distance d uses d units of energy.

Input Specification

The first line of the input is $Z \leq 20$ the number of test cases. This is followed by Z test cases. Each test case begins with three space-separated integers: C, T, and L. Each of the following $C \times T$ lines gives, respectively, the location and energy consumption of a class. The first T lines represent the classes of category 1, the next T lines represent the classes of category 2, and so on. No two classes in the same category will have the same location.

Bounds

$1 \leq C \leq 25$
$1 \leq T \leq 1000$
$1 \leq L \leq 1{,}000{,}000$
$1 \leq E_{ij} \leq 1{,}000{,}000$
$0 \leq P_{ij} \leq L$

Sample Input

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1
3 2 5
2 1
3 1
4 1
1 3
1 4
3 2
```

Explanation of Sample Input

Fred must take 3 classes every day, and for each he has 2 choices. The hall has length 5. His first possible class is located at position 2 and will take 1 unit of energy each day, etc.

Output Specification

For each input instance, the output will be a single integer on a line by itself which is the minimum possible energy of a schedule satisfying the constraints.

Output for Sample Input

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Explanation of Sample Output

Here is one way to obtain the minimum energy:
Go to the class at location 2. Energy used: 3
Next, go to the class at location 4. Energy used: 6
Then go to the class at location 3. Energy used: 9
Finally, leave the school at location 5. Energy used: 11

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