

C. Rishabh and Girlfriends

Time limit : 1 sec

Memory Limit : 256 MB

Problem Statement

Rishabh has N girlfriends. He has D days to date them. Each day he can date at most one girl. The i -th girl arrives on day D_i and then stays till the end. The i^{th} girl wants to date Rishabh exactly T_i times. For each day a i^{th} girl doesn't date Rishabh, she will feel sad and her sadness level will be increased by S_i .

Rishabh wants to keep his girlfriends to be as less sad as possible so he asks you to find minimum total sadness of his girlfriends.

Input

The first line of the input contains an integer T ($1 \leq T \leq 10$), denoting the number of testcases.

For each test case, the first line contains two space separated integers, N, D ($1 \leq N, D \leq 10^5$).

The i -th of the next N lines will contain three space separated integers: D_i, T_i ($1 \leq D_i, T_i \leq D$), S_i ($1 \leq S_i \leq 10^5$) respectively.

Output

For each test case, output a single integer corresponding to the minimum total sadness achievable.

Sample Input 1

```
3
2 3
1 2 300
2 2 100
2 3
1 1 100
2 2 300
2 3
3 2 150
1 1 200
```

Sample output 1

```
100
0
150
```

Explanation

Example case 2. In this case, all the girls can date Rishabh their ideal number of days.

Example case 3. In this case, the first girl arrives on day 3 and wants to date 2 times. This is not possible as she can date at most one day on day 3 and Rishabh's time ends on day 3. The second girl wants to date only once which she can do on any one of the 1st or 2nd days. You can see that in one of the first or second days, Rishabh won't date anyone.