Quarantine-centers

With recent rise of in the pandemic, most Sri Lankans wants to return to SL. Unfortunately, there are a limited number of hotels to quarantine the incoming citizens. In addition, government has made a new regulation as to passengers from only one aircraft can be quarantined in a hotel at a time.

Since the hotels are filling up soon, the goernment has relaxed the quarantine regulations. Now, the number of quarantine days is dependent on the country. For example, a country like Israel (where most inhabitants are vaccinated) requires a smaller quarantine length while India (where many people are dying) requires a longer quarantine.

There is a fixed amount of money that a hotel can charge per day per person.

Input Format

The first line contains an integer T denoting the number of testcases.

For each testcase, the following information is given.

R (the number of rooms in your hotel), F (the number of flight information available to you) and P (the profit earned when a room is occupied for one day) are in a single line seperated by a space.

Then there are F lines with three integers A_i (the arrival date of the flight), Q_i (the quarantine time required) and P_i (the number of passengers in the flight).

Constraints

$$0 < T \leq 20$$

$$0 < R \leq 2500$$

$$0 < F \leq 25000$$

$$0 < P \leq 20$$

$$0 < A, Q \leq 500000000$$

$$0 < P \leq 5000$$

Output Format

Output the maximum money your hotel can earn.

Sample Input 0

```
2
100 3 10
0 3 20
0 5 50
4 6 80
35 4 7
0 2 25
2 4 25
4 7 25
3 6 40
```

Sample Output 0

```
5400
1820
```

Explanation 0

Testcase 1
Hotel can hold 100 people. Profit per day = 10

Flight	**0**	1	**2**
Arrival date (zero indexed)	**0**	0	**4**
No of days in Quarantine	**3**	5	**6**
People leave quarantine on	**2**	4	**9**
No of people in flight	**20**	50	**80**
No of people who can stay in the hotel	**20**	50	**80**
Profit = people*days*charge	**20*3*10**	50*5*10	**80*6*10**

We pick flights 0 and 2 only (to avoid having people from two flights in the hotel at the same day)
The total profit is = 20*3*10 + 80*6*10 = 5400

Testcase 2
Hotel can hold 35 people. Profit per day = 7

Flight	**0**	1	2	**3**
Arrival date (zero indexed)	**0**	2	4	**3**
No of days in Quarantine	**2**	4	7	**6**
People leave quarantine on	**1**	5	10	**8**
No of people in flight	**25**	25	25	**40**
No of people who can stay in the hotel	**25**	25	25	**35**
Profit = people*days*charge	**25*2*7 =350**	25*4*7 =700	25*7*7= 1225	**35*6*7 =1470**

We pick flights 0 and 3 only (to avoid having people from two flights in the hotel at the same day)
The total profit is = 350 + 1470 = 1820