27 Time is money

14 points

Introduction

As you may already know, HP has an R&D site located in Leon, Spain.
It is usual that people there travel to our site in Sant Cugat in order to catch up with team mates, attend to learning sessions, events, etc.
The cheapest way to get from Leon to Barcelona is by taking a train.
Unfortunately, railways in Spain are notorious for their delays, and this is annoying for passengers. The train company has signed a punctuality commitment and offers refunds for clients. You are told to develop a software program that calculates the amount to be repaid to each passenger, which depends on how much time the train was delayed, and the price that they paid. The code also has to compute the total money loss for the company.

The route of the train is as follows:
Leon → Palencia - Burgos - MirandaDeEbro - Vitoria - Pamplona - Tudela - Zaragoza -Lleida - Tarragona → Barcelona

The refund policy is as follows:
- A compensation of half the price of the ticket will be given if the train is delayed 30 to 59 minutes.
- A compensation of the entire price of the ticket will be given if the train is delayed 60 or more minutes.

Note that a passenger only has right to refund if the delay occurs in the part of the route that he travels, or before. Someone that goes from Burgos to Vitoria will not receive any money if the train suffers a delay between Zaragoza and Lleida.
However, if there is a delay between Leon and Palencia, that one affects him, since the train will arrive late at the station of departure (Burgos).

Input

The input is a report from the company, and consists of 3 parts:
-The amount of delays and passengers that complained
- A list of the delays, specifying where occurred and how much time (minutes) was lost*.
-A list of the complaining passengers, including the name, city of departure, city of destination, and the price (in euros) of the ticket.

*To simplify the problem, it is assumed that there are only delays between stations. Then, the city appearing in the delay information indicates that the incident was between that one and the previous one, e.g: "Burgos 30" means that there was a delay of 30 minutes between Palencia and Burgos.

Example 1

```
2 4
MirandaDeEbro 40
Zaragoza 35
Juan Leon Burgos 60
Maria Pamplona Zaragoza 100
Luis Palencia Barcelona 140
Ana Tarragona Barcelona 20
```

Example 2

```
2 1
MirandaDeEbro 40
Zaragoza 35
Michael Palencia Vitoria 18
```

Output

The output must be a list of sentences indicating how much money Renfe has to pay each passenger, and a final line telling the total amount of money that was spent in compensations. Use exactly the same text format than indicated in the example below.
The output for the previous input would be:

Example 1

```
Juan receives 0 euros
Maria receives 100 euros
Luis receives 140 euros
Ana receives 20 euros
Total loss for train company is: 260 euros
```

Example 2

```
Michael receives 9 euros
Total loss for train company is: 9 euros
```