Starting at different times

Level 2

Calculate the arrival times when the cars have different starting times. Each car starts on its own segment.

Input

Like level 1 but with different starting times

Number road segments (n)
Number of cars (m)
startsegment,endsegment,starting time car 1
...
startsegment,endsegment,starting time car m

1 < n < 1000 1 < m < 1000 1 <= starting time <= 10000

Result:

Arrival times of the cars, separated by comma, in the order of the input

Example input

40 10 11,13,28 30,37,62 4,24,102 6,33,138 27,30,154 20,32,170 11,19,196 2,20,209 18,21,239 23,24,273

Example output

31,70,123,166,158,183,205,228,243,275