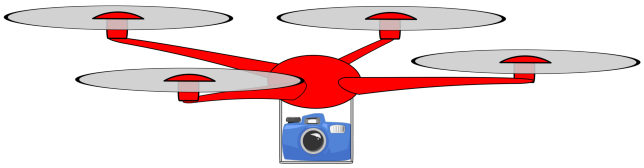
Drina's Drone



Drina, a friend of yours who decided to invest in the drone renting business, has already bought a first high-end (and very expensive) drone. The renting process, which might seem very old-fashioned, was conceived to maximise the profit taking advantage of the fact that a drone with so many innovative features attracts lots of people.

There is a period for customers to send their renting offers. A renting offer specifies a time interval and the price the customer is willing to pay for renting the drone during that time interval. As offers are secret and independent, they can often not be all compatible. So, when the offering period ends, Drina has to analyse carefully all offers in order to select those that will be accepted. Can you help her select a (compatible) set of offers that maximises her profit?

For instance, if there were four offers, defined each by a triple of the form "(starting time, duration, price)":

$(3, 4, 10)$, $(6, 7, 14)$, $(7, 2, 3)$, and $(9, 9, 9)$,

the maximum profit would be 19 ($19 = 10 + 9$), obtained by accepting the first and the last offers. Notice that the first and the third offers are also compatible (the drone would change hands at instant 7) but they do not maximise Drina's profit.

Task

Given all the renting offers made, your task is to calculate the maximum profit Drina can obtain by accepting a (compatible) subset of offers.

Input

On the input first line there is an integer, T, which represents the number of test cases.

For each test case there is a first line containing an integer, N, which is the total number of renting offers. Each of the following N lines corresponds to a customer's offer. It has three integers: the starting instant S and the duration D of the time interval, and the price P the customer is willing to pay for renting the drone during that time interval.

Constraints

$1 \leq T \leq 10^2$	(Number of test cases)
$1 \leq N \leq 10^4$	(Number of offers)
$0 \leq S \leq 10^9$	(Starting instant of a time interval)
$1 \leq D \leq 2 \times 10^4$	(Duration of a time interval)
$1 \leq P \leq 10^4$	(Price to pay for the renting)

Output

The output consists of T lines. The i^{th} line contains the maximum profit Drina can obtain by accepting a (compatible) subset of the offers made in the i^{th} test case.

Sample Input

```
2
4
9 9 9
3 4 10
7 9 8
6 7 14
3
10 13 15
22 2 9
11 3 8
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Sample Output

```
19
17
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