Cake orders P58661_en

Ewelina loves baking beautiful cakes for special occasions. As a result of the quality of her work, she has received from friends and family more cake orders than she can handle, and she needs help to decide which orders to accept.

Ewelina has a list of n cake orders, each described by three integers: the delivery time D_i, the amount of time W_i it will take her to complete the work, and the beauty B_i of the cake she has in mind. She would like to accept the subset of cake orders that maximizes the total sum of cake beauty, taking into account that she will never work on more than one cake at once, and that she will always work on a cake as late as possible (that is, between instant $D_i - W_i$ and instant D_i) so that the cake is in the best condition when delivered.

Input

Input consists of several cases, each one with an n between 1 and 10^5, followed by n triples of integers D_i W_i B_i. Assume $1 \leq W_i \leq D_i \leq 10^8$ and $1 \leq B_i \leq 10^4$.

Output

For every case, print the maximum possible sum of beauty of the delivered cakes.

Sample input 1

```
2
10 4 1000
16 6 2000

2
10 4 1000
16 7 2000

5
900000 800000 5000
500000 100000 2000
900000 300000 2000
800000 350000 3000
300000 300000 2000
```

Sample output 1

```
3000
2000
6000
```

Problem information

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