# Burger Happiness

In Burger Town new burger restaurants will be opened! Concretely, $N$ restaurants will open in $N$ days, while restaurant $i$ will be opened on day $i$ and will be located at $X_i$. The town should be imagined as an one dimensional line in which every object's location can be described by the $x$ coordinate.

Tim has just recently arrived the town after a very bad result in a programming contest. Thus he wants to cheer himself up by starting a trip to try out some new burgers.

Every burger restaurant $i$ is associated with two integers $A_i$ and $B_i$. If Tim eats a burger from $i$, then his happiness will increase by $A_i$, which can also be negative, depending on the deliciousness of the burger. On the other hand, if Tim looks through the window of an opened restaurant $i$, from which he will *not* eat a burger, then his happiness decreases by $B_i$, since Tim gets sad by only seeing the burgers.

Tim's journey can start from any day $d$ at the burger restaurant $d$ and eats a burger from there. On each subsequent day $n > d$, Tim has the following options:

- Stay at the previous restaurant $p$.
- Or go to the new restaurant $n$ to eat a burger from there.

If he decides for the latter option, then on the path from $p$ to $n$ he will look through all the windows that are on his path and maybe lose some happiness. Concretely, if $X_p < X_n$, then he will look through the window of every *opened* restaurant $i$, having $X_p \leq X_i < X_n$. Similar for the case $X_n < X_p$.

Since Tim is a very good friend of yours you should help him finding a trip that will maximize his happiness. If he should stay at home since no trip would cheer him up, then print `0`.

**Note**: Tim's happiness is 0 at the beginning of the trip and is allowed to be negative throughout the time.

**Input Format**

$N$ will be given on the first line, then $N$ lines will follow, describing the restaurants numbered from 1 to $N$ accordingly. Restaurant $i$ will be described by $X_i$, $A_i$ and $B_i$ separated by a single space.

**Output Format**

Output the maximium happiness on one line.

**Constraints**

- $1 \leq N \leq 10^5$
- $|A_i| \leq 10^6$
- $0 \leq B_i \leq 10^6$
- $0 \leq X_i \leq 10^9$ and no two restaurants will have the same $X$ coordinates.

**Sample Input**

```
3
2 -5 1
1 5 1
3 5 1
```

**Sample Output**

```
8
```

**Sample Input**

```
4
4 10 0
1 -5 0
3 0 10
2 10 0
```

**Sample Output**

```
15
```

**Sample Input**

```
3
1 -1 0
2 -2 0
3 -3 0
```

**Sample Output**

```
0
```

First testcase: His trip starts on day 2 at restaurant 2 located at $X_2 = 1$. He gains $A_2 = 5$ happiness points there by eating a burger. On the next day he goes from restaurant 2 to 3, but will look through the window of restaurant 2 and 1. Therefore he loses $B_2 = 1$ and $B_1 = 1$ points on the way to restaurant 3. There he eats a burger and gains another $A_3 = 5$ points. In total his happiness is equal to $5 - 1 - 1 + 5 =$ `8` and this is optimal.

Second testcase: His trip starts on day 1 at restaurant 1. Then his actions on day 2, 3 and 4 will be go to restaurant 2, stay at restaurant 2 and go to restaurant 4 respectively. The happiness of this optimal trip is equal to $10 - 5 + 10 =$ `15`.

Third testcase: It's not worth to start the trip from any of the restaurant since he will only have negative happiness. That's why he should stay at home and `0` should be printed.