Spire

Time Limit	Memory Limit
1 second	128 MB

Statement

After a cataclysmic event[1] that caused the destruction of the Great Spire holding up the sky, Opal, the head architect, has been tasked with creating a new spire. To create the spire, Opal has N components, the ith component being of length l_i, width w_i and height h_i, and she intends to stack these components on top of each other. To ensure stability in the new spire's design, Opal will only place a component x on top of another component y if $l_x \leq l_y$ and $w_x \leq w_y$. Components cannot be rotated.

The height of the spire is equal to the sum of the heights of each individual component used in the spire. As taller spires are generally considered more impressive, Opal wants her spire to be as tall as possible. Given the dimensions of the components, what is the maximum height spire that can be built?

Input

The first line contains the integer N. The next N lines each contain 3 integers l_i w_i h_i.

Output

Output 1 integer, the maximum height.

As the answer can become quite large, C++ users are advised to use 64-bit integers (`long long` instead of `int`).

Sample Input 1

```
3
8 4 6
3 2 3
2 6 4
```

Sample Output 1

```
9
```

Sample Input 2

```
5
3 1 4
1 5 9
2 6 5
3 5 8
9 7 9
```

Sample Output 2

```
26
```

[1] It seems that the destruction of the Spire was caused by the heart at the top of the Spire being stabbed with hundreds of poisonous shivs.

Explanation

- For sample 1, stack component 2 on top of component 1. The height is $6 + 3 = 9$.
- For sample 2, an optimal spire consists of components 2,4,5 (from top to bottom). The height is $9 + 8 + 9 = 26$. No other valid spire has a higher height.

Constraints

- $1 \leq N \leq 10^5$
- $1 \leq l_i, w_i, h_i \leq 10^9$ for all i

Subtasks

Number	Points	Other constraints
1	5	$w_i = 1$ for all i
2	8	$N \leq 8$
3	28	$N \leq 300$
4	39	$N \leq 2000$
5	20	No further constraints