

Scheduling Lectures

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

Hogwarts has invited **N** teachers to educate people about the COVID-19 pandemic. The Ministry of Magic has decided to announce a total lockdown in Hogwarts, if the condition doesn't improve in next **D** days. So, the teachers have got only **D** days to teach. At most one lecture can be scheduled each day. The i^{th} teacher arrives on day D_i and stays till lockdown. He/She also wants to teach exactly T_i lectures. For each lecture that a teacher was not able to teach, he/she will curse Hogwarts and the curse level will increase by S_i .

You have been assigned the job to schedule lectures so that Hogwarts will have to face minimum curse after D days.

Input

The first line of input contains two space separated integers: **N**, **D**.

The i -th of the next **N** lines contains three space separated integers: D_i , T_i , S_i .

Constraints:

$$1 \leq N, D \leq 10^5$$

$$1 \leq D_i, T_i \leq D$$

$$1 \leq S_i \leq 10^5$$

Output

Output a single integer representing the minimum total curse achievable.

Examples

standard input	standard output
2 3 1 2 300 2 2 100	100
2 3 1 1 100 2 2 300	0
2 3 3 2 150 1 1 200	150

Note

Due to large I/O, it is recommended to use the provided reader class. As usual, you are not allowed to use Java's Collections framework or inbuilt algorithms' implementation