Unicornosaurus

Time limit: *800 ms*
Memory limit: *256 MB*

Tiranca the unicornosaurus broke Sherbot's duckinator*. After close inspection, she realized that there were N intervals $[L_i, R_i]$ of broken planks. In each interval, all of the planks numbered from L_i to R_i were completely destroyed.

Luckily, Tiranca is a unicornosaurus and she possesses M superpower actions to repair the duckinator. Each superpower costs C_i rainbows and can be used to repair all the planks in the interval $[A_i, B_i]$. To fix the duckinator, she has to fix all of the broken planks and, because rainbows are expensive, she should use the smallest possible number of rainbows.

1* *Duckinator*: Long fence made of wide planks used to catch ducks. The planks are arranged in a line, numbered from 1 to S.

Standard input

The first line contains three integers, N, M and S. The i-th following N lines contain two integers, L_i and R_i, describing the damage done to the duckinator. The i-th following M lines contain three integers A_i, B_i and C_i, describing Tiranca's possible superpower actions.

Standard output

The output should contain the minimum number of rainbows required to repair the duckinator. In case it is impossible to fix, the output should be `-1`.

Constraints and notes

- $1 \leq S \leq 10^5$
- $1 \leq C_i \leq 10^9$
- $1 \leq L_i \leq R_i \leq S$
- $1 \leq N, M \leq 10^5$
- The intervals of broken planks **may overlap**.
- The author made up the term **duckinator**.

Input	Output	Explanation

`1 3 15`
`5 10`
`3 7 2`
`6 12 5`
`2 11 6`
	`6`	There is one broken segment: $[5, 10]$.
		We choose $[2, 11]$ with the total cost of 6 to fix it.
		Note that another solution would be choosing $[3, 7]$ and $[6, 12]$, but the total cost of that would be 7.

`2 4 15`
`3 7`
`9 10`
`2 6 10`
`3 9 15`
`5 12 13`
`8 10 30`
	`23`	There are two broken segments: $[3, 7]$ and $[9, 10]$.
		We choose $[2, 6]$ and $[5, 12]$ with the total cost of 23 to fix it.