

The Cosmic Era P3 - Battle Positions

Time limit: 0.1s **Memory limit:** 128M
Java: 0.6s
Python: 0.6s

The ZAFT are attacking the Orb Union! There are I stations, numbered from $1, 2, \dots, I$, that need to be defended. For it to be secure, the Orb Union needs to have at least N troops at each station. Unfortunately, due to the radar-jamming effects of the Neutron Jammer, the Orb Union cannot order their troops to move between stations. The Orb Union will send J waves of troops, each of which sends K troops to each of the stations X_i, X_{i+1}, \dots, X_f . All stations start with 0 troops.

The Orb Union wants you to help them find the number of stations that are not secure.

Input Specification

The first line will contain the integer I ($1 \leq I \leq 10^5$), the number of stations.

The second line will contain the integer N ($1 \leq N \leq 10^9$), the minimum number of troops required to defend a station.

The third line will contain the integer J ($1 \leq J \leq 10^5$), the number of waves of troops.

The next J lines will contain 3 space-separated integers. These integers will be in the order X_i, X_f, K ($1 \leq X_i \leq X_f \leq I$) ($1 \leq K \leq 10^4$).

Output Specification

Output the total number of stations that have less than N troops.

Sample Input

```
4
1
3
1 3 1
2 3 2
3 3 2
```

Sample Output

```
1
```

Explanation for Sample Output

Station 1 has 1 troop, station 2 has 3 troops, station 3 has 5 troops and station 4 has 0 troops. Station 4 is the only station with less than 1 troop, so the output is 1.