Problem I. ICPC Inference

Time limit: 3 seconds
Memory limit: 1024 megabytes

Let's consider an ICPC competition with rules almost identical to AMPPZ. Teams submit solutions, which are evaluated as correct or incorrect. The first correct submission for a problem increases the team's time penalty by the number of minutes[4] from the start of the competition plus **20** minutes for each previous incorrect submission[5] for this task. All submissions to a problem after the first correct one are ignored and do not affect the team's score. Teams are ranked in descending order by the number of correctly solved problems. Ties are resolved in ascending order of the total time penalty, and further ties are resolved randomly.

The competition has just ended! It lasted for L minutes and D teams submitted a total of N submissions for **13** problems prepared by the organizers. The top three teams with a positive score will stand on the podium. The jury decided not to spoil the surprise and did not look at the results of the submissions or even which problems the submissions were for. For each submission, they only knew the time and the team that submitted it. The jury is now wondering what the podium could look like, i.e., the sequence of the top three teams in the ranking, each of which has solved at least one problem.

Find the number of such possible podiums from the jury's perspective. We ignore cases where fewer than three teams have solved any problems.

Input

The first line of the input contains three integers: N, D and L ($3 \le N, D, L \le 200\,000$). These represent the number of submissions, the number of teams, and the duration of the competition in minutes, respectively.

In the following N lines, there are two integers in each line: d_i and t_i ($1 \le d_i \le D$, $1 \le t_i \le L$, $t_i \le t_{i+1}$). These integers denote the team index and the time of the i-th submission from the start of the competition. These submissions are sorted by time.

Output

Output a single integer – the number of possible ordered sets of three teams on the podium.

Examples

standard input	standard output
4 3 300 1 10 2 25 2 30 3 50	3
4 6 200000 6 1 6 1 1 2 2 2	4

Note

In the first sample test case, there are 3 possible podium configurations:

- $(1, 2, 3)$ – if each of the teams correctly solved one problem with total time penalties of $(10, 25, 50)$

[4] AMPPZ measures the submission time precise to seconds.
[5] In AMPPZ, only submissions that compile successfully increase the time penalty.

or $(10, 30, 50)$ or $(10, 50, 50)$. The last option assumes that team 2 submitted incorrect and then correct solutions for the same problem, resulting in a total time penalty of $30 + 20 = 50$.

- $(1, 3, 2)$ – again, with total time penalties of $(10, 50, 50)$, with the tiebreaker decided randomly in favor of team 3.
- $(2, 1, 3)$ – if team 2 correctly solved two problems, and the other teams solved one each.

In the second sample test case, the possible podium configurations are $(1, 2, 6)$, $(2, 1, 6)$, $(6, 1, 2)$, and $(6, 2, 1)$.