

The 2025-2026 ICPC Latin America Contests

Problem L – Lonely Creatures

There are N creatures, numbered from 1 to N , that live in an infinite city represented by the 2D plane. Creature i lives on the straight line $y = M_i \cdot x + C_i$; it may move anywhere along that line. No two creatures share the same line, but a meeting occurs if their lines intersect. In that case, the intersection point is called a *meeting point* of the two creatures.

The city has just built a new playground. The playground's boundary is the (axis-aligned) parabola $y = A \cdot x^2 + B$, where $A > 0$. The playground is the open region $y > A \cdot x^2 + B$, so points exactly on the boundary are not inside the playground.

Now the city officials want to know whether the new playground is reducing loneliness, and that's where your help is needed. Your task is to count how many distinct pairs of creatures have a meeting point that lies strictly inside the playground. Each pair is counted once; the order of the creatures in a pair does not matter.

Input

The first line contains three integers N ($2 \leq N \leq 10^5$), A ($1 \leq A \leq 10^4$) and B ($-10^4 \leq B \leq 10^4$), indicating that there are N creatures and that the playground is the open region of the 2D plane $y > A \cdot x^2 + B$. Each creature is identified by a distinct integer from 1 to N .

The i -th of the next N lines contains two integers M_i and C_i ($-10^4 \leq M_i, C_i \leq 10^4$), representing that creature i lives on the straight line $y = M_i \cdot x + C_i$. It is guaranteed that no two lines are identical.

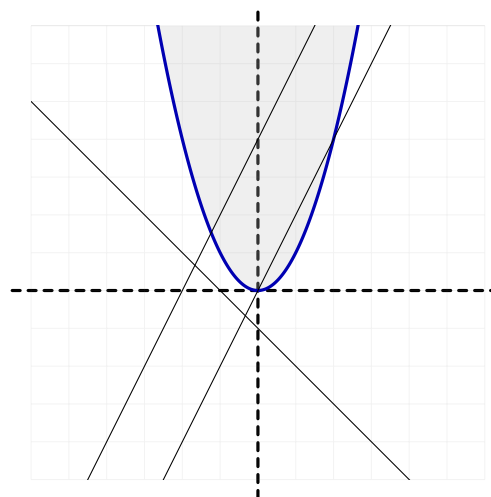
Output

Output a single line with an integer indicating the number of distinct pairs of creatures whose meeting point lies strictly inside the playground.

Sample input 1	Sample output 1
<pre>3 1 0 -1 -1 2 4 2 0</pre>	<pre>0</pre>

Explanation of sample 1:

Creature 1 meets creatures 2 and 3, but in both cases the meeting point lies outside the playground. There are no other meeting points, so the answer is 0.

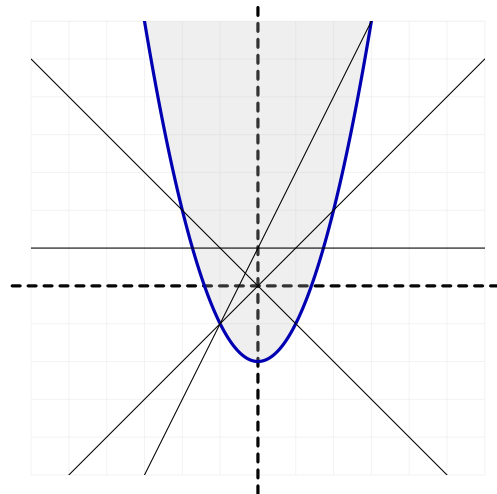


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Sample input 2	Sample output 2
<pre>4 1 -2 -1 0 0 1 1 0 2 1</pre>	<pre>5</pre>

Explanation of sample 2:

Each pair of creatures have a meeting point. However, the meeting point of creatures 3 and 4 lies on the playground boundary ($y = A \cdot x^2 + B$), so that pair is excluded from the count.



Sample input 3	Sample output 3
<pre>4 1 0 7 -3 5 -2 3 -1 1 0</pre>	<pre>6</pre>