Triangles

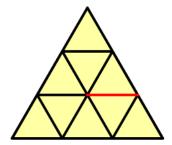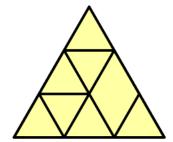|	
Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

> *Did you know that Egypt is not the country with the most pyramids? That title actually goes to Sudan, whose Nubian pyramids number over 200, compared to roughly 118 in Egypt.*
>
> — Freddie Hand

Grammy has a triangular grid paper with a large triangle on it. The large triangle, having a side length of n, is divided into n^2 smaller triangles with side length 1. The original shape of the triangular grid paper is illustrated in the first picture.

Now, Grammy wants to set a problem with this paper, so she chooses a horizontal edge and deletes it, and asks you to find the number of remaining triangles on the paper. One example of the resulting grid is shown in the second picture.

Input

The only line contains 3 integers n, a, b ($1 \le b \le a \le n \le 10^6$), denoting the side length of the grid, the chosen row, and the chosen index of the deleted edge.

Output

Output a single integer, denoting the number of triangles in the resulting grid.

Examples

standard input	standard output
3 2 2	10
849586 233333 123456	153307446989958297

Note

In the first example, the initial triangle grid has a side length of 3. After deleting the second edge in the second horizontal row, the resulting grid has 10 triangles left.