HSS

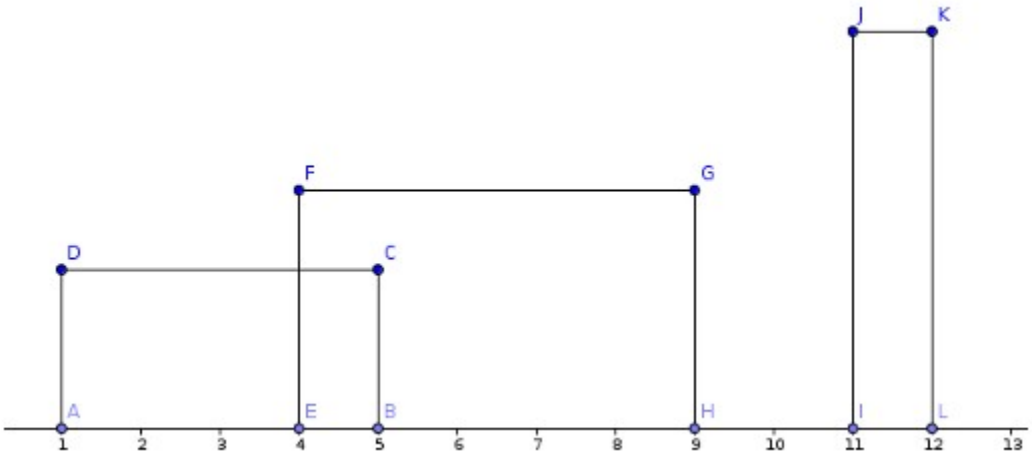
The art and craft course teacher came across a vary interesting drawing board made of multiple canvases (N in number and rectangular in shape), which may be overlapping. She gave the first year's the task to paint the board.
To make the task a bit easy she aligned the base of each canvas to the base of the board. (Assume the base of the board to be X-axes). First years are broke and don't want to buy any extra paint hence they want to know the total area spanned by the canvases.
Note: The region of overlapping canvases should not be painted twice.

Input:
First line contains N, the number of canvases on the board.
Each canvas is described by it's height (h) and the X-coordinate of left and right side (x1, x2).
[basically a tuple of (h,x1,x2)]

Output;
The total area spanned by the canvases. (Discounting the overlapping)
Since the answer can be large output the answer modulo (10^9 + 9).

Constraints:
1 <= N <= 10^5
-10^9 <= x1 < x2 <= 10^9
1 <= h <= 10^9

Example:
A board with 3 canvases shown below.
Assume AD = 3, EF = 4 and JK = 6
Answer: 4*3 + 5*4 – 1*3 + 1*6 = 35



Sample Input:
3
3 1 5
4 4 9
6 11 12

Sample Output:
35