

# Problem G

## Equations

**Input:** Standard Input  
**Output:** Standard Output

Find the number of solutions, the equation  $\sum X_i = s$  have, if  $A_i \leq X_i \leq B_i$  for each  $i = 1 \dots n$ .

For example,

$$\begin{aligned} X_1 + X_2 + X_3 &= 10 \\ -1 \leq X_1 &\leq 3 \\ 2 \leq X_2 &\leq 4 \\ 6 \leq X_3 &\leq 7 \end{aligned}$$

The above set of equations has 6 solutions. They are: {1,4,7}, {0,3,7}, {0,4,6}, {1,2,7}, {1,3,6} and {2,2,6}.

You are given  $n$  the number of variables and the range of them. Your task is to calculate the number of solutions of that equation.

### Input:

First line of the Input contains  $T$  ( $\leq 50$ ) the number of test cases. Then  $T$  test cases follow. First line of each test case contains 2 integer  $n$  ( $1 \leq n \leq 10$ ) and  $s$  ( $-50000 \leq s \leq 50000$ ). Next  $n$  lines each contain 2 integers describing the range of each variable. The  $i^{\text{th}}$  line  $A_i$  and  $B_i$  ( $-10000 \leq A_i \leq B_i \leq 10000$ ).  $X_i$  can take any integral value in the range  $[A_i, B_i]$ .

### Output:

For each test case output contains one integer denoting the number of solutions of the given equations. Output the value **modulo 200003**.

Sample Input	Sample Output
1 3 10 -1 3 2 4 6 7	6

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**Special Thanks To:** Istiaque Ahmed & Mohammad Mahmudur Rahman