

11266 Equations

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 (≤ 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 -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

```
1
3 10
-1 3
2 4
6 7
```

Sample Output

```
6
```