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

For example:

$X_1 + X_2 + X_3 = 10$
$-1 \le X_1 \le 3$
$2 \le X_2 \le 4$
$6 \le X_3 \le 7$

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 ($1 \le n \le 10$) and s ($-50000 \le s \le 50000$). Next n lines each contain 2 integers describing the range of each variable. The i-th line A_i and B_i ($-10000 \le A_i \le B_i \le 10000$). 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
```