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# Chef and Inequality

Problem Code: LTM40AB

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Chef likes inequalities. Please help him to solve next one.

Given four integers **a**, **b**, **c**, **d**. Find number of solutions  $x < y$ , where  $a \leq x \leq b$  and  $c \leq y \leq d$  and **x**, **y** integers.

## Input

The first line contains an integer **T** denoting number of tests.First line of each test case contains four positive integer numbers **a**, **b**, **c** and **d**.

## Output

For each test case, output a single number each in separate line denoting number of integer solutions as asked in the problem.

## Constraints

- $1 \leq T \leq 20$
- $1 \leq a, b, c, d \leq 10^6$

## Subtasks

- Subtask #1: (30 points)**  $1 \leq a, b, c, d \leq 10^3$ .
- Subtask #2: (70 points)** Original constraints.

## Example

Input :

1  
2 3 3 4[All Submissions](#)[Successful Submissions](#)

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1  
2 999999 1 1000000

**Output :**

499998500001

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Editorial: <http://discuss.codechef.com/problems/LTM40AB>  
Tags: [basic-math](#), [cakewalk](#), [ltime40](#), [mgch](#)  
Date Added: 12-09-2016  
Time Limit: 1 secs  
Source Limit: 50000 Bytes  
Languages: C, CPP14, JAVA, PYTH, PYTH 3.5, PYPY, CS2, PAS fpc, PAS gpc, RUBY, PHP, GO, NODEJS, HASK, SCALA, D, PERL, FORT, WSPC, ADA, CAML, ICK, BF, ASM, CLPS, PRLG, ICON, SCM qobi, PIKE, ST, NICE, LUA, BASH, NEM, LISP sbcl, LISP clisp, SCM guile, JS, ERL, TCL, PERL6, TEXT, SCM chicken, CLOJ, FS

## Comments ▶

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