

Chef and Inequality

Problem Code: **LTM40AB**

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** ≤ **x** ≤ **b** and **c** ≤ **y** ≤ **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

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

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

Input:

```
1
2 3 3 4
```

Output:

```
3
```

Input:

```
1
2 999999 1 1000000
```

Output:

499998500001