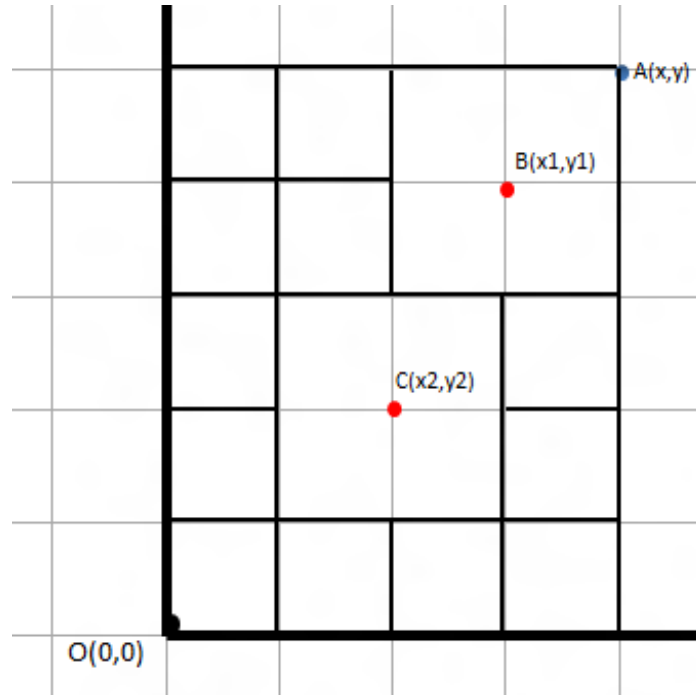


# Cartesian Shortest Path

The task is simple, on the 2D cartesian coordinate system, how many different shortest path from point  $O(0,0)$  to point  $A(x,y)$ , but not through point  $B(x_1,y_1)$  and  $C(x_2,y_2)$ .



Score is the length of your source.

## Input

The first line is an integer  $T$  ( $1 \leq T \leq 10000$ ), denoting the number of test cases. Then,  $T$  test cases follow.

Each test case consist of 3 lines:

- first line contains two integer  $x$  and  $y$  ( $1 \leq x, y \leq 10$ ) location of point A
- second line contains two integer  $x_1$  ( $0 \leq x_1 < x$ ) and  $y_1$  ( $1 \leq y_1 \leq y$ ) location of point B
- third line contains two integer  $x_2$  ( $1 \leq x_2 \leq x$ ) and  $y_2$  ( $0 \leq y_2 < y$ ) location of point C

## Output

For each test case, output number of different shortest path from  $(0,0)$  to point A but not through point B and C.

## Example

**Input:**

2

4 5

3 4

2 2

3 3

2 1

1 2

**Output:**

32

2

**See also:** [Another problem added by Tjandra Satria Gunawan](#)