

# Counting Triangles 2

This is a new version of problem CT with the new limit:  $X, Y \leq 10000$ , and the result will be written in modulo 2009

## Input

The input begins with  $C$  – number of test cases.  
Each test case consists of  $X, Y$ .

## Output

For each test case, output the result in a line.

## Limit

$C \leq 200$

$0 \leq X, Y \leq 10000$

## Example

**Input:**

```
2
0 3
1 1
```

**Output:**

```
0
4
```