# **Convex Polygons**

#### **English**

#### Vietnamese

You are given n points in the 2-D cartesian coordinate system. You are to determine the number of convex polygons with 3 or more vertices which can be formed by choosing a subset of the given points. To make matters simple, the input obeys the following conditions:

- (1) No 3 points in the input are collinear.
- (2) No 2 points will have the same coordinates.

Since the result can be quite large, you are required to output (result % 1234567) instead.

### Input

First line contains an integer T, the number of test cases. In each test case, first line contains n, the number of points in the corresponding test case, next n lines contain 2 space separated integers denoting the coordinate of ith point. Absolute value of the coordinates do not exceed 10000.

## Output

T lines each corresponding to the answer of corresponding test case.

## Example

- 22 02
- 1 -1
- 13

#### Output:

5 42

## Constraints

Input Set 1 : numberOfTestCases <= 100, 3 <= n <= 10 timeLimit: 5 seconds Input Set 2 : numberOfTestCases <= 50, 3 <= n <= 100 timeLimit: 5 seconds