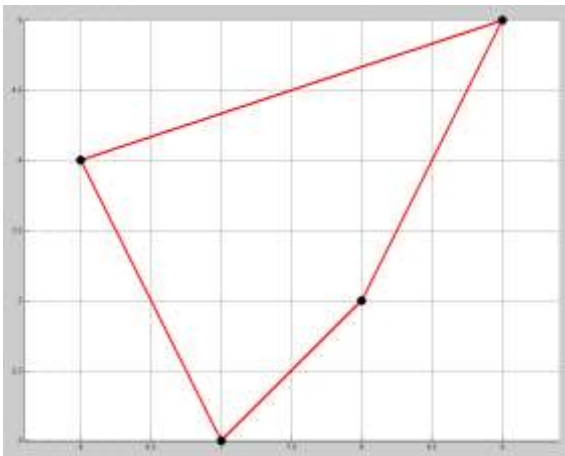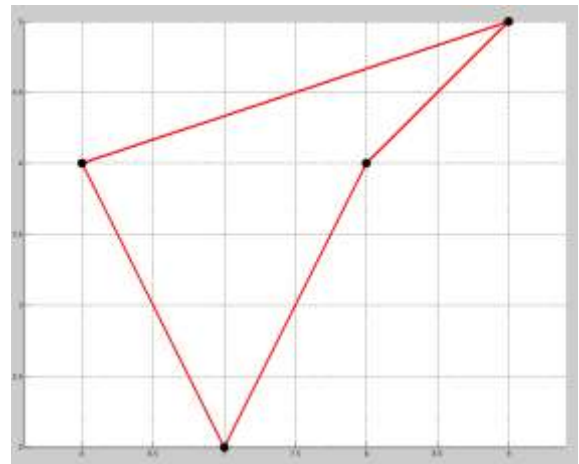# Convex Quadrangles

Your task is very simple. You will get the coordinates of **n** points in a plane. It is guaranteed that there are no three points on a straight line. You can choose any four points from these points to construct a quadrangle. Now, please tell me how many convex quadrangles you can construct.

convex quadrangle   *Non-convex quadrangle*

Input

The first line of input contains an integer **z** ($z \leq 20$), indicating the number of test cases. For each test case, the first line contains an integer **n** ($4 \leq n \leq 700$), indicating the number of points. Each of the next **n** lines contains two integers **x** and **y** ($-1000000 \leq x, y \leq 1000000$), indicating the coordinate of corresponding point.

Output

For each test case, output a single integer, the number of convex quadrangles you can construct, in a separate line.

Sample Input	Sample Output
2 4 0 0 0 1 1 0 1 1 4 0 0 1 0 0 1 -1 -1	1 0