BUET INTER-UNIVERSITY PROGRAMMING CONTEST

PROBLEM C – COUNTING TRIANGLES

Problem

You are given a convex polygon of **N** vertices. Find how many ways three vertices can be chosen such that the triangle formed by those has an area **not more than K**.

Input

The first line of input contains **T** ($\mathbf{1 \leq T \leq 10}$) which is the number of tests cases. Each case contains two integers **N** ($\mathbf{3 \leq N \leq 1,000}$) and **K** ($\mathbf{1 \leq K \leq 10^{15}}$)**.** Each of the next **N** lines will contain two integers: $\mathbf{x_i}$ $\mathbf{y_i}$ denoting **i-th** vertex of the polygon $\left(\mathbf{-4 * 10^6 \leq x_i, y_i \leq 4 * 10^6}\right)$. The vertices will be given in anti-clockwise order.

Output

For each test case output one line the number of ways to choose a triangle from the vertices of the convex polygon whose area is **not more than K**.

Sample Input	Output for Sample Input
1 5 30 -5 -5 -2 -10 3 0 1 7 -2 4	7

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